

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					R-1 ITEM NOMENCLATURE 0204136N F/A-18 SQUADRONS			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		204.131	172.743	134.580	82.998	17.949	14.145	11.088
E1662 F/A-18 Improvements		88.742	64.504	44.296	14.603	11.320	10.908	11.088
E2065 F/A-18 RADAR Upgrade		104.691	108.239	90.284	68.395	6.629	3.237	
E9267 F414 Engine Durability Improvements		6.655						
E9268 APG-73 Radar Upgrade		4.043						
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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 and to ensure interoperability in a network centric environment. 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>F/A-18 Improvements: 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). Additional capabilities are required for interoperability in a network-centric operational environment. 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 for interoperability in a network centric operational environment, to include: increased software capabilities, potential new hardware capabilities,upgrading existing hardware, and network centric warfare upgrades. Additionally, a continuing capability is needed to perform technical evaluations/investigative flight testing, provide software based on reported fleet problems.</p>								

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<p>F/A-18 Radar Upgrade: 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> <p>F414 Engine Durability Improvements: The FY03 Congressional add supports 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 engine. The improved component efficiency of the EDE could be used to increase life or performance of the F414 engines.</p> <p>AN/APG-73 Radar Upgrade: 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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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204136N/F/A-18 SQUADRONS				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		88.742	64.504	44.296	14.603	11.320	10.908	11.088
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). Additional capabilities are required for interoperability in a network-centric operational environment. 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 for interoperability in a network centric operational environment, to include: increased software capabilities, potential new hardware capabilities, upgrading existing hardware, and network centric warfare upgrades. Additionally, a continuing capability is needed to perform technical evaluations/investigative flight testing, provide software based on reported fleet problems.

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 3 of 29)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204136N/F/A-18 SQUADRONS	PROJECT NUMBER AND NAME E1662 F/A-18 Improvements																	
(U) B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></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 style="text-align: center;">0.884</td><td style="text-align: center;">0.982</td><td style="text-align: center;">0.800</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 10px; margin-top: 10px; min-height: 60px;">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 , systems, and Network Centric Warfare capability.</div>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.884	0.982	0.800	RDT&E Articles Quantity				
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(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget:	95.079	69.032	44.463
Current BES/President's Budget	88.742	64.504	44.296
Total Adjustments	-6.337	-4.528	-0.167
Summary of Adjustments			
Congressional program reductions			
Congressional undistributed reductions		-0.768	
Congressional rescissions			
SBIR/STTR Transfer	-2.305		
Economic Assumptions			-0.106
Reprogrammings	-4.032		
Reprioritization		-3.760	-0.061
Congressional increases			
Subtotal	-6.337	-4.528	-0.167

(U) Schedule:

ATFLIR schedule slip due to delay in receiving MS III decision.

MIDS OT-IIAI was moved to leverage off of 19C FOT&E, which allowed time for validation correction discrepancies (VCD).

ACS DT 11A runs through the start of TECHEVAL.

JHMCS Aft Seat FOT&E was moved to leverage off of 19C and H3E FOT&E respectfully.

HOL - FOT&E for H2E was expanded by one Quarter to leverage test assets

(U) Technical:

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<p>(U) D. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Line Item No. & Name</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2003</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2004</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2005</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2006</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2007</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2008</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2009</th> <th style="text-align: right; border-bottom: 1px solid black;">To Complete</th> <th style="text-align: right; border-bottom: 1px solid black;">Total Cost</th> </tr> </thead> <tbody> <tr> <td>APN-1 (E/F) Weapons System Cost Line Item 3 F/A-18E/F Hornet (MYP)</td> <td style="text-align: right;">3196.934</td> <td style="text-align: right;">3044.133</td> <td style="text-align: right;">2985.762</td> <td style="text-align: right;">2848.414</td> <td style="text-align: right;">2351.712</td> <td style="text-align: right;">2066.567</td> <td style="text-align: right;">1753.698</td> <td style="text-align: right;">3077.01</td> <td style="text-align: right;">21324.23</td> </tr> <tr> <td>APN-1 (G) Weapons System Cost Line Item 2 EA-18G</td> <td></td> <td></td> <td style="text-align: right;">8.243</td> <td style="text-align: right;">333.98</td> <td style="text-align: right;">882.315</td> <td style="text-align: right;">1292.063</td> <td style="text-align: right;">1568.357</td> <td style="text-align: right;">2467.353</td> <td style="text-align: right;">6552.311</td> </tr> <tr> <td>APN-5 Line Item 27 F-18 Series Modification</td> <td style="text-align: right;">385.732</td> <td style="text-align: right;">361.044</td> <td style="text-align: right;">412.495</td> <td style="text-align: right;">394.319</td> <td style="text-align: right;">504.613</td> <td style="text-align: right;">451.616</td> <td style="text-align: right;">468.834</td> <td style="text-align: right;">1515.582</td> <td style="text-align: right;">4494.235</td> </tr> </tbody> </table> <p>Related RDT&E (U) P.E. 0207163N Advanced Medium Range Air-to-Air Missile (AMRAAM) (U) P.E. 064269N EA-18 G (FY05-09) (U) P.E. 0604270N Electronic Warfare Development (FY02-04)</p> <p>(U) E. ACQUISITION STRATEGY:</p> <p>The F/A-18 Improvements program consists of extensive development projects and integration of avionics systems onto the F/A-18E/F. The major programs within the F/A-18 Improvements project are:</p> <p>* ANAV. ANAV development is provided on a sole source cost plus fixed fee contract on an R&D Basic Ordering Agreement to Boeing. Procurement of production hardware will be made as CFE through the prime contractor.</p> <p>* ATFLIR. The ATFLIR development was a sole source cost plus incentive fee contract to Boeing which was completed in FY03. The procurement supplier is sole source to Boeing.</p> <p>* 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 cost type 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.</p> <p>* Advanced Crew Station. The design and development of the Advanced Crew Station modification is sole source to Boeing as the Prime aircraft contractor.</p> <p>* MIDS. An acquisition developmental effort supported by SPAWAR (PMW-159), MIDS is being developed by a consortium of international companies.</p> <p>* JHMCS. JHMCS development is via a sole source cost plus award fee Joint Air Force contract to Boeing.</p>										Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost	APN-1 (E/F) Weapons System Cost Line Item 3 F/A-18E/F Hornet (MYP)	3196.934	3044.133	2985.762	2848.414	2351.712	2066.567	1753.698	3077.01	21324.23	APN-1 (G) Weapons System Cost Line Item 2 EA-18G			8.243	333.98	882.315	1292.063	1568.357	2467.353	6552.311	APN-5 Line Item 27 F-18 Series Modification	385.732	361.044	412.495	394.319	504.613	451.616	468.834	1515.582	4494.235
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Exhibit R-3 Cost Analysis (page 1)								DATE:				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
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
Primary Hardware Development PIDS/DCS	SS/CPFF/FFP	MDA-ST LOUIS,MO	90.000								90.000	90.000
Primary Hardware Development ATFLIR	SS/CPIF/AF	MDA-ST LOUIS,MO	154.845	8.310	11/02						163.155	163.155
AWARD FEE ATFLIR			1.576								1.576	
Primary Hardware Development ANAV	SS/CPFF	MDA-ST LOUIS,MO		9.212	09/03	6.669	03/04	1.741	03/05	5.685	23.307	23.307
Primary Hardware Development ACS	SS/CPIF	MDA-ST LOUIS, MO	36.810	10.110	11/02	9.585	11/03	0.179	11/04		56.684	56.684
Primary Hardware Development HOL	SS/CPIF/TDL	NAWCWD-CHINA LAKE	117.446	6.289	11/02	1.669	11/03	2.016	11/04		127.420	127.420
Primary Hardware Development JHMCS	MIPR	WPAFB DAYTON, OHIO	16.560	20.638	02/03	19.419	02/04	11.743	02/05		68.360	
Primary Hardware Development MISC.	WX	OTHER FIELD ACTIVITIES	14.532	5.788	11/02	5.194	11/03	8.075	11/04		33.589	
Ancillary Hdw Develop ATFLIR	WX	NAWCAD-LAKEHURST NJ	9.201								9.201	
Subtotal Product Development			440.970	60.347		42.536		23.754		5.685	573.292	
Remarks: FY99 and prior year award fee earned is 74.7% (ATFLIR)												
Development Support MISC	VARIOUS	VARIOUS	33.092	4.049	11/02	4.214	11/03	3.135	11/04	3.854	48.344	
Software Development	WX	NAWCWD-CHINA LAKE	106.067	9.602	12/02	7.689	12/03	9.430	12/04	19.862	152.650	
Prior Year Costs	Various	Various	2,567.069								2,567.069	
Subtotal Support			2,706.228	13.651		11.903		12.565		23.716	2,768.063	
Remarks: Prior year costs (FY95 & prior) not broken out into separate categories.												

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Exhibit R-3, Project Cost Analysis
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Exhibit R-3 Cost Analysis (page 2)									DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROGRAM ELEMENT 0204136N F/A-18 SQUADRONS			PROJECT NUMBER AND NAME 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	47.969	7.094	11/02	4.312	11/03	6.669	11/04	12.341	78.385	
Operational Test & Evaluation	WX	OPTEVFOR, NORFOLK, VA	6.704	6.254	11/02	4.365	11/03				17.323	
Subtotal T&E			54.673	13.348		8.677		6.669		12.341	95.708	
Remarks:												
Program Management Sup	VARIOUS	NAVAIR, PAX RIVER, MD	7.917	0.241	11/02	0.484	11/03	0.408	11/04	2.620	11.670	
Travel	WX	NAVAIR, PAX RIVER, MD	3.122	1.155	VAR	0.904	VAR	0.900	VAR	3.557	9.638	
Subtotal Management			11.039	1.396		1.388		1.308		6.177	21.308	
Remarks:												
Total Cost			3,212.910	88.742		64.504		44.296		47.919	3,458.371	
Remarks:												

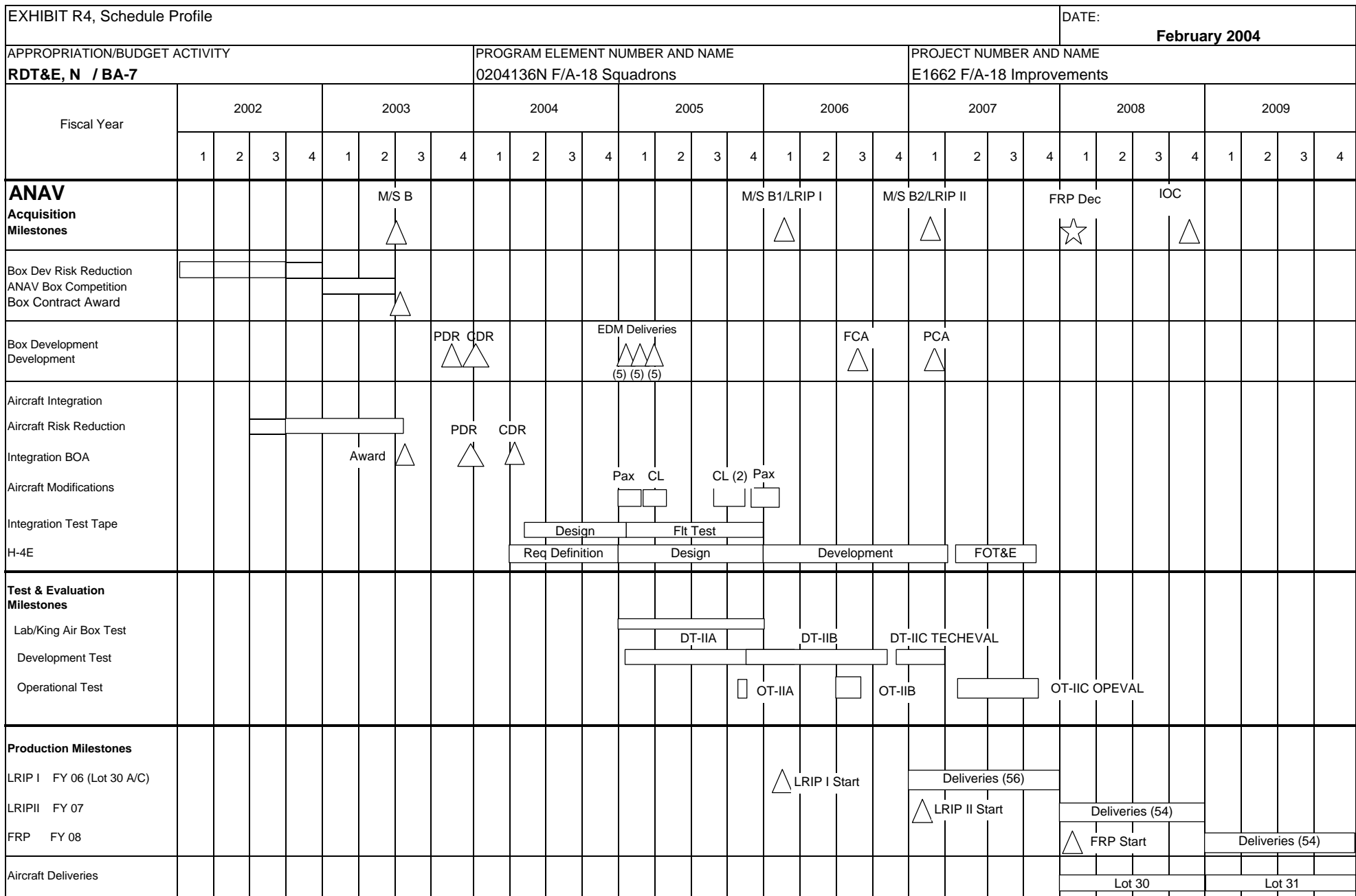
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Exhibit R-3, Project Cost Analysis
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Exhibit R-4, Schedule Profile

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Exhibit R-4a, Schedule Detail						DATE: February 2004		
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 ANAV	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 Start						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

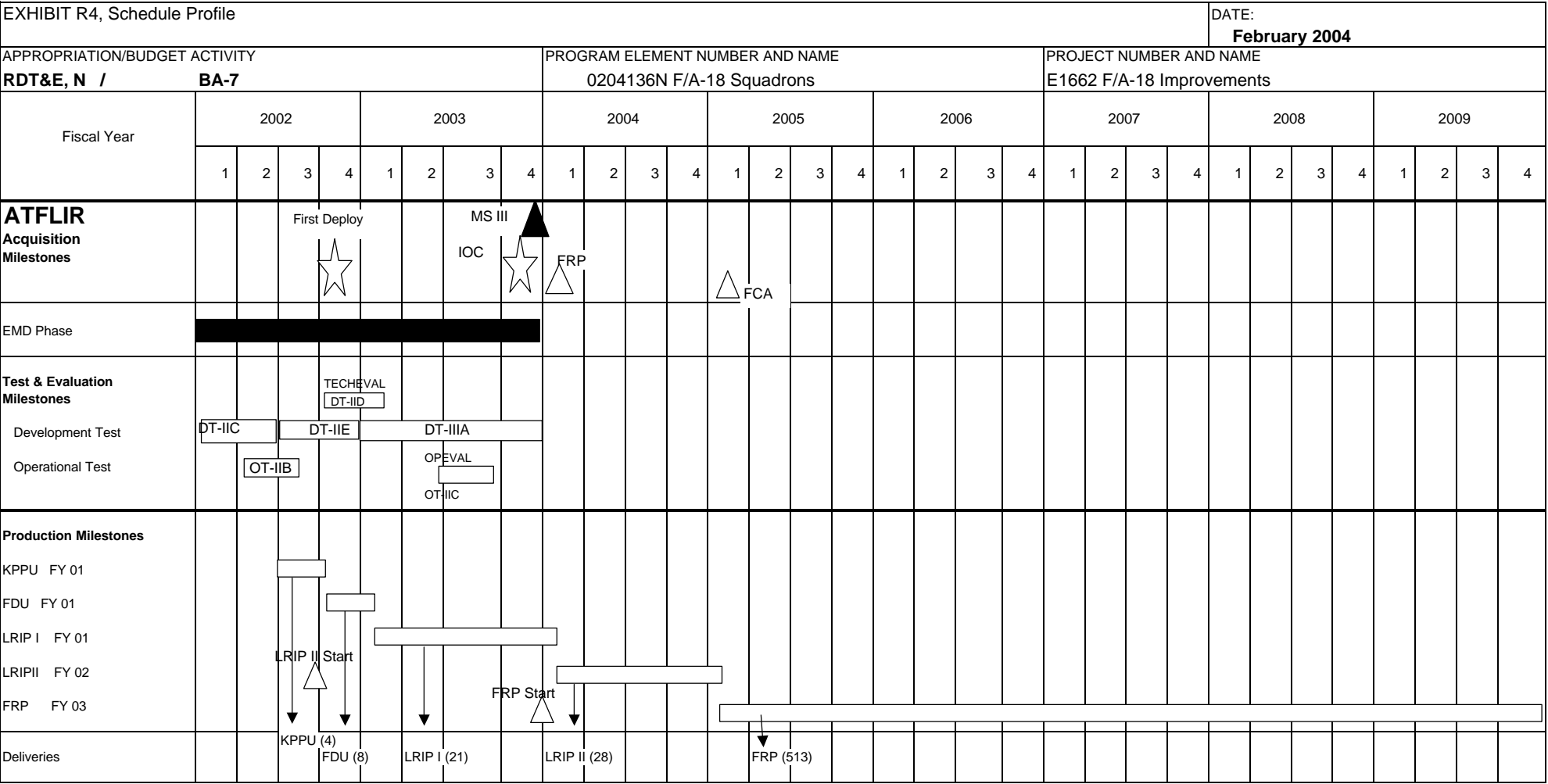
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Exhibit R-4a, Schedule Detail
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* Not required for Budget Activities 1, 2, 3, and 6

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CLASSIFICATION:

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R-1 SHOPPING LIST - Item No. 166

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Exhibit R-4a, Schedule Detail
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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE: February 2004								
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7										PROGRAM ELEMENT NUMBER AND NAME 0204136N F/A-18 Squadrons										PROJECT NUMBER AND NAME 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				
ACS Acquisition Milestones								FRP DVMC												IOC												
									△											☆												
Prototype Phase																																
System Development	CDR																															
	△																															
EDM Delivery								DVMC, 8x10, HC, AMC T2																								
					△																											
Software ACS/AESA Test Readiness Review ACS/AESA BRR H3E TRR					ACS/AESA ATTR				ACS/AESA BRR																							
					△				△	H3E Release to Navy																						
									△																							
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 14 of 29)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2004		
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						
First flight Developmental Testing (DT) for ACS Aircraft		1Q-4Q	1Q-4Q	1Q-3Q				
FOT&E ACS					2Q-4Q			
Techeval				3Q-4Q	1Q-2Q			
IOC					4Q			
Initial Delivery Lot 26		4Q	1Q					
FRP DVMC			1Q					

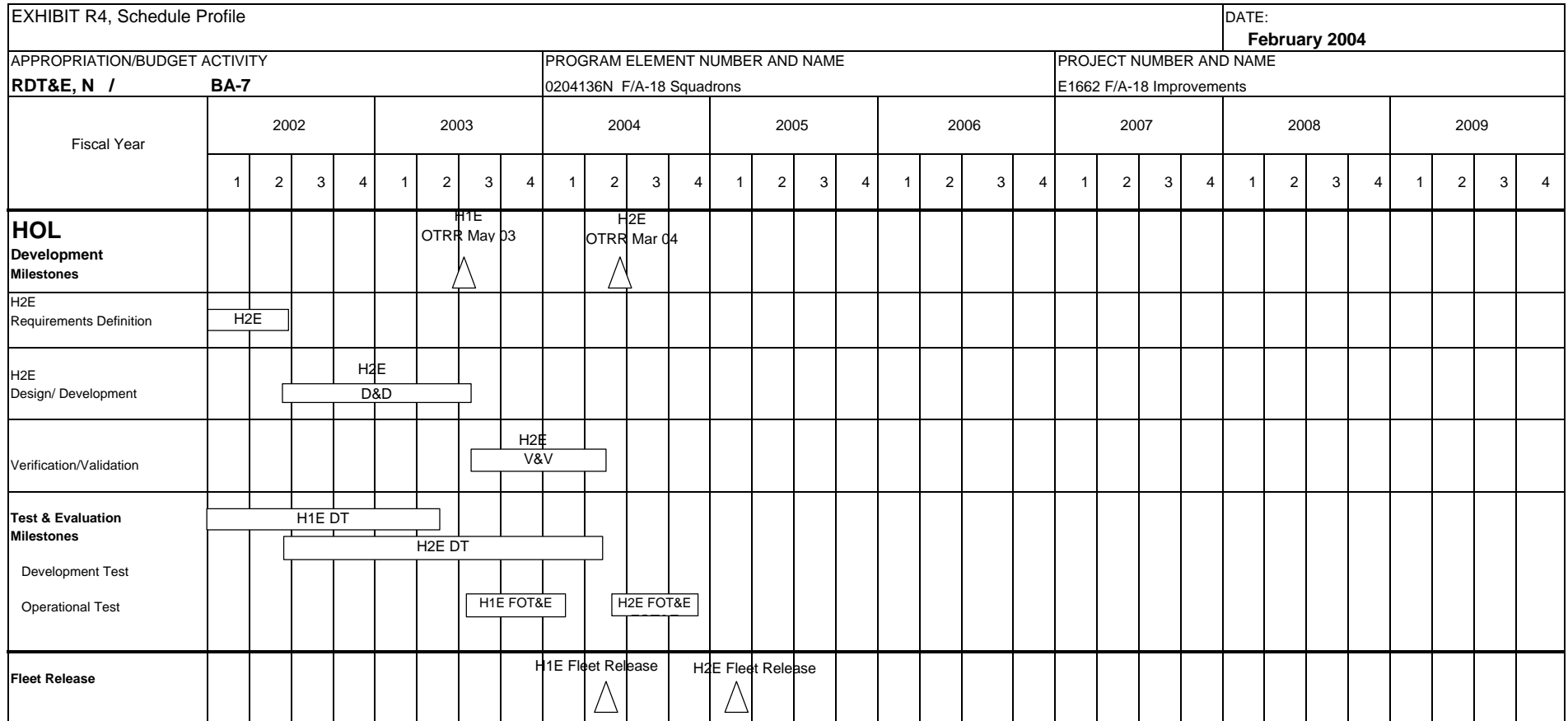
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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 15 of 29)

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 17 of 29)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE: February 2004									
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7										PROGRAM ELEMENT NUMBER AND NAME 0204136N F/A-18 Squadrons										PROJECT NUMBER AND NAME 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	
JHMCS Acquisition Milestones					1st Deployment ▲				MS III ▲																								
Prototype Phase																																	
JHMCS Front Seat Development	PDR ▲		CDR ▲																														
JHMCS Aft Seat Development									PDR ▲		CDR ▲																						
Software OFP-19C Delivery OFP-H3E Delivery					SCRB ▲	Design/Develop				TRR ▲	DT		Ver/Val ▲	FOT&E ▲	Delivery ▲					CTRR ▲	FOT&E ▲	Delivery ▲											
						SCRB ▲	Design/Develop				TRR ▲				DT																		
Test & Evaluation Milestones																																	
Development Test					▲																												
Operational Test	OT-IIB OPEVAL																																
Production Deliveries	LRIP II Start ▲																																
LRIP II																																	
LRIP III					LRIP III Start ▲																												
LRIP IV																																	
FRP																																	

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Note: MS III decision in work by MDA. Proposed plan, addition of LRIP IV in FY03, followed by MS III decision in early FY04.

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 18 of 29)

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&E, N / BA-7	0204136N F/A-18 Squadrons				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
Preliminary Design Review (PDR) Front Seat	1Q							
Critical Design Review (CDR) Front Seat	3Q							
Preliminary Design Review (PDR) AFT Seat			1Q					
Critical Design Review (CDR) AFT Seat			3Q					
Test Readiness Review (TRR) Aft Seat			1Q,3Q					
Developmental Testing Aft Seat	4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q			
Operational Testing (OT-IIIB) Front Seat	1Q-2Q							
Development Test (DT) D AFT seat			3Q-4Q	1Q-2Q				
Development Test (DT) F AFT seat				3Q-4Q	1Q-2Q			
Software Delivery OFP-19C				4Q				
Follow On Test Evaluation (D Aft Seat)				2Q-3Q				
Follow On Test Evaluation (F Aft Seat)					3Q-4Q			
Software Delivery OFP-H3E						1Q		
LRIP II	1Q							
LRIP III	4Q							
LRIP IV			2Q					
Full Rate Production Start			2Q					
First Deployment		1Q						

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 19 of 29)

CLASSIFICATION:

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EXHIBIT R-4a, Schedule Profile

DATE:

February 2004

APPROPRIATION/BUDGET ACTIVITY

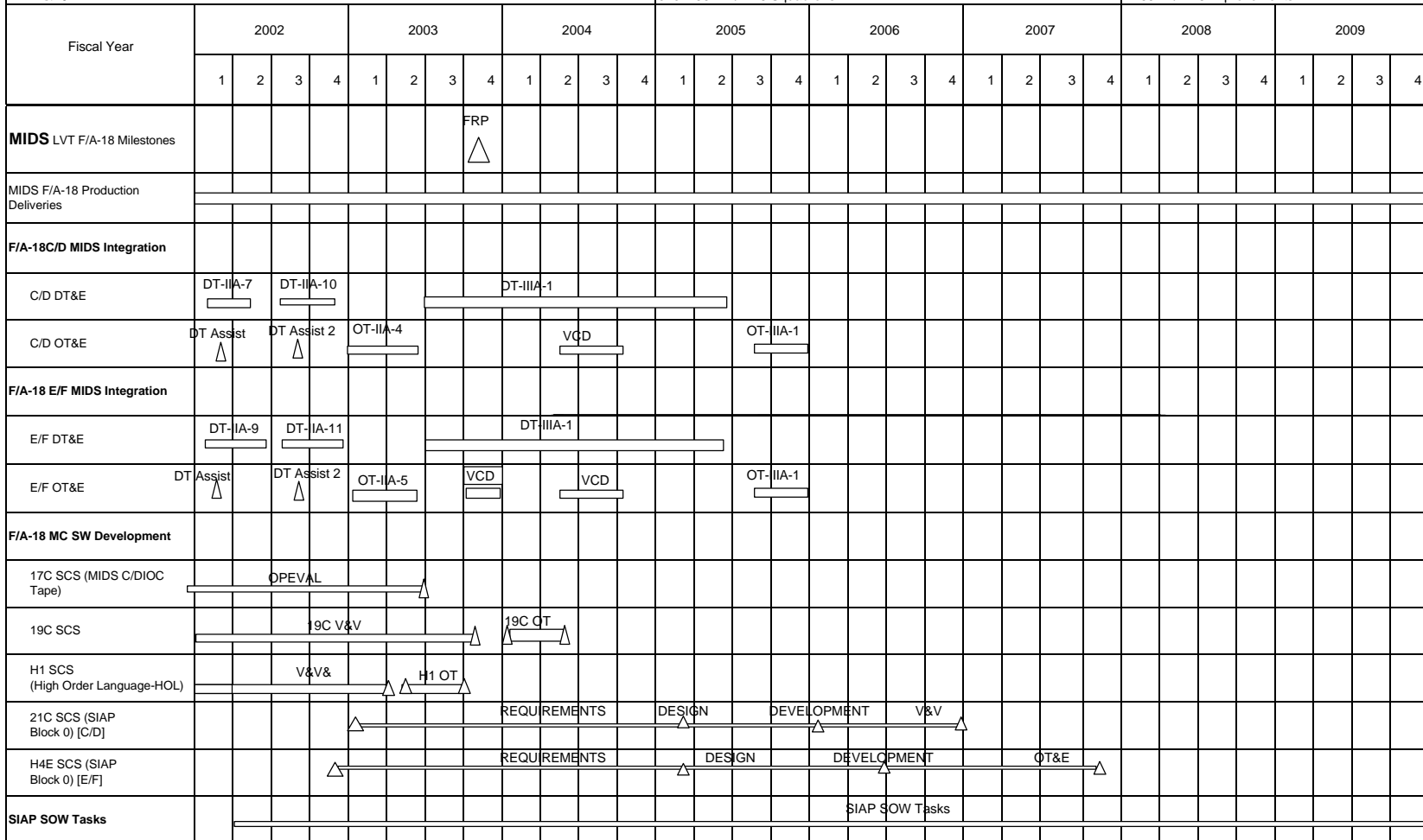
PROGRAM ELEMENT

PROJECT NUMBER AND NAME

RDT&E/BA-7

0204136N F/A-18 Squadrons

E1662 F/A-18 Improvements



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Exhibit R-4a, Schedule Detail
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CLASSIFICATION:

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Exhibit R-4a, Schedule Detail						Date: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E/BA-7	PROGRAM ELEMENT 0204136N F/A-18 Squadrons				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
MIDS Schedule Profile	FY2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MIDS LVT Development								
Full Rate Production		4Q						
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-4Q	1Q-2Q					
C/D OT&E	1Q, 3Q	1Q-2Q	2Q-3Q	3Q-4Q				
F/A-18 E/F MIDS Integration								
E/F DT&E	1Q-4Q	3Q-4Q	1Q-4Q	1Q-2Q				
E/F OT&E	1Q, 3Q	1Q-2Q,4Q	2Q-3Q	3Q-4Q				
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	2Q-3Q						
21C SCS (SIAP Block 0) [C/D]		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q			
H4E SCS (SIAP Block 0) [E/F]	4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q		
SIAP SOW Tasks	2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

CLASSIFICATION:

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EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2004	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
RDT&E, N / BA-7		0204136N/F/A-18 SQUADRONS			E2065 F/A-18 RADAR Upgrade			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
E2065/RADAR UPGRADE		104.691	108.239	90.284	68.395	6.629	3.237	
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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.								

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 22 of 29)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204136N F/A-18 SQUADRONS	PROJECT NUMBER AND NAME E2065 F/A-18 RADAR Upgrade		
B. Accomplishments/Planned Program				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		89.732	74.421	56.428
RDT&E Articles Quantity				
Continue EMD effort and radar cross-section assessments. Start Anti-Tamper Development in FY05.				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		14.809	29.968	24.706
RDT&E Articles Quantity				
Continue software development, DT, and systems integration efforts.				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		0.150	3.850	9.150
RDT&E Articles Quantity				
AESA OT&E.				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 23 of 29)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			February 2004	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-7	0204136N F/A-18 SQUADRONS	E2065 F/A-18 RADAR Upgrade		

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget:	104.481	110.015	78.578
Current BES/President's Budget	104.691	108.239	90.284
Total Adjustments	0.210	-1.776	11.706

Summary of Adjustments

Congressional program reductions			
Congressional undistributed reductions		-1.226	
Congressional rescissions			
SBIR/STTR Transfer	-1.947		
Economic Assumptions			-0.241
Reprogrammings	2.157		
Reprioritization		-0.550	11.947
Congressional increases			
Subtotal	0.210	-1.776	11.706

Schedule:

Anti-Tamper Development continues through FY08. OT-C1 Phase II was incorporated in FY05 for OPEVAL risk reductin and will be completed in a DT assist environment.

Technical:

Incorporating Anti Tamper development into AESA starting in FY05.

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
(1) Line Item 3 F/A-18E/F HORNET (MYP) APN-1	78.158	85.967	112.830	169.350	179.660	186.360	183.230	365.780	1361.335
(2) Line Item 27 F-18 SERIES MODIFICATION APN- (OSIP XX-07)	0	0	0	0	87.131	69.757	76.768	86.280	319.936

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 24 of 29)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204136N F/A-18 SQUADRONS	PROJECT NUMBER AND NAME E2065 F/A-18 RADAR Upgrade
<p>E. ACQUISITION STRATEGY:</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. When the program entered production in FY03, the "845" agreement allowed 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>		

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204136N F/A-18 SQUADRONS			E2065 F/A-18 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	196.031	89.459	10/02	74.197	10/03	56.213	10/04	64.188	480.088	480.088
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			204.448	89.459		74.197		56.213		64.188	488.505	
Remarks:												
Software Development	WX	NAWCWD China Lake, CA	4.590	8.428	10/02	14.072	10/03	11.689	10/04		38.779	
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	0.164	11/03	0.175	10/04	0.182	1.326	
Subtotal Support			5.558	8.636		14.236		11.864		0.182	40.476	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 26 of 29)

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-7			PROGRAM ELEMENT 0204136N F/A-18 SQUADRONS			PROJECT NUMBER AND NAME E2065 F/A-18 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	1.767	10/02	1.822	10/03	1.327	10/04		10.588	
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		4.614	10/02	14.074	10/03	11.690	10/04		30.378	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			5.672	6.531		19.746		22.167		13.851	67.967	
Remarks:												
Program Management Support	Various	NAVAIR Pax River, MD	1.652								1.652	
											0.000	
Travel	WX	NAVAIR Pax River, MD	0.295	0.065	10/02	0.060	10/03	0.040	10/04	0.040	0.500	
											0.000	
											0.000	
											0.000	
Subtotal Management			1.947	0.065		0.060		0.040		0.040	2.152	
Remarks:												
Total Cost			217.625	104.691		108.239		90.284		78.261	599.100	
Remarks:												

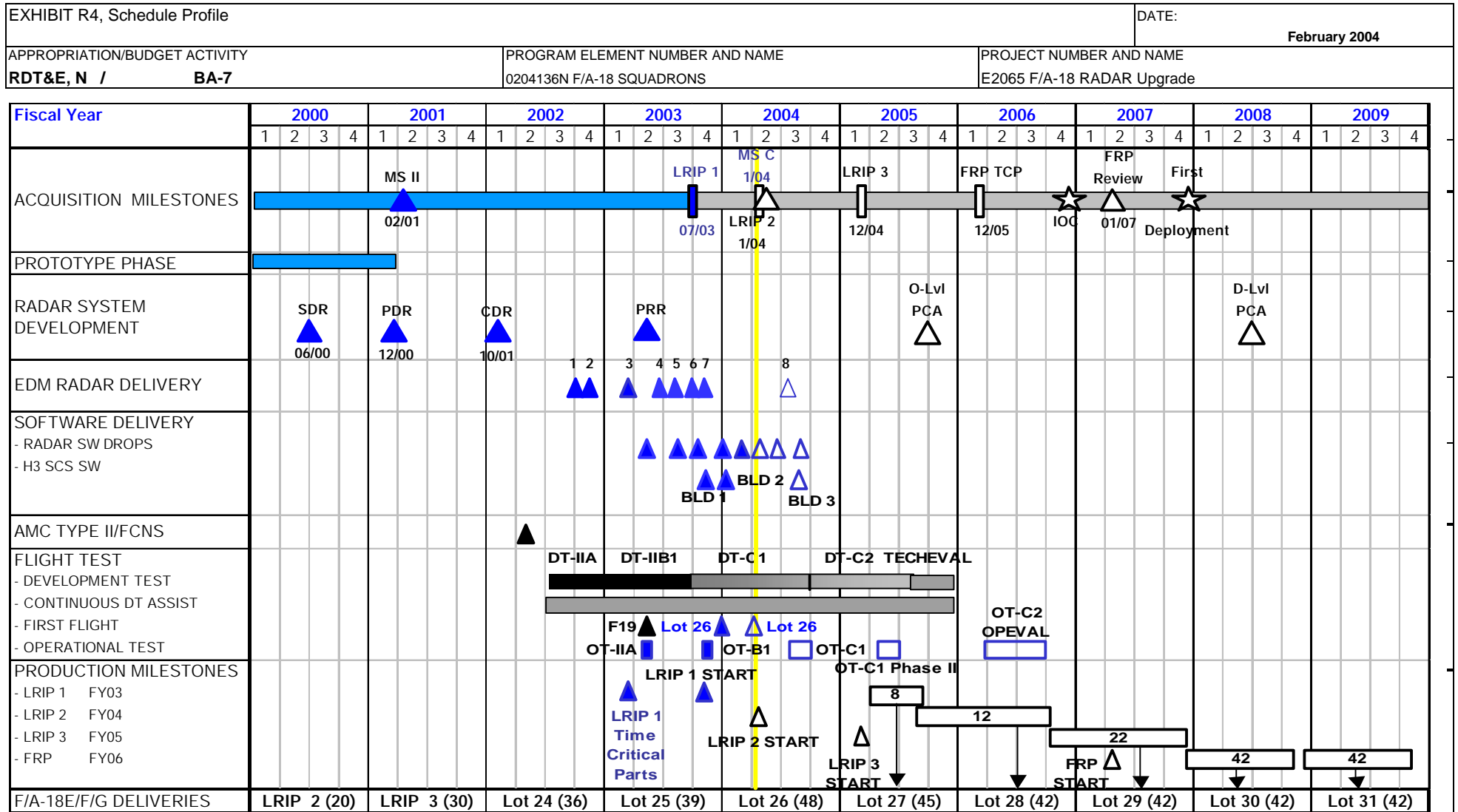
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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 27 of 29)

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 28 of 29)

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						February 2004		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME		
RDT&BA-7		0204136N F/A-18 SQUADRONS				E2065 F/A-18 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)	3Q-4Q							
Operational Testing (OT-IIA)		2Q						
Start Low-Rate Initial Production I (LRIP I)		4Q						
Developmental Testing (DT-IIB1)		1Q-3Q						
Developmental Testing (DT-C1)		4Q	1Q-3Q					
Developmental Testing (DT-C2)			4Q	1Q-3Q				
Milestone C (MS C)			2Q					
Start Low-Rate Initial Production II			2Q					
Low-Rate Initial Production I Delivery				2Q-3Q				
Technical Evaluation (TECHEVAL)				3Q-4Q				
Operational Evaluation (OT-IIC) (OPEVAL)					2Q-3Q			
Low-Rate Initial Production II Delivery				3Q-4Q	1Q-3Q			
IOC					4Q			
Full Rate Production (FRP) Decision						2Q		
Full Rate Production Start						2Q		
First Deployment						4Q		

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