

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2004	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					Program Element 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		1,661.509	2,159.197	2,264.507	2,493.847	2,281.780	2,086.355	1,615.586
D2261/JSF SDD								
This Program Element continues development efforts budgeted in program element 0603800N prior to FY 2002.								
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Strike Fighter program will develop and field a family of aircraft that meets the needs of the USN, USAF, USMC and allies, with maximum commonality among the variants, consistent with National Disclosure Policy (NDP), to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom and other International countries are participants in the JSF Program.								

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME Program Element 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM				PROJECT NUMBER AND NAME Project Unit (PU) No. D2261, JOINT STRIKE FIGHTER (JSF) SDD			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		1,661.509	2,159.197	2,264.507	2,493.847	2,281.780	2,086.355	1,615.586
RDT&E Articles Qty					6	8		

This Program Element continues development efforts budgeted in program element 0603800N prior to FY 2002.

Quantity of 14 RDT&E articles reflect flight test articles; 8 ground test articles are also budgeted in SDD

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Strike Fighter program will develop and field a family of aircraft that meets the needs of the USN, USAF, USMC and allies, with maximum commonality among the variants, consistent with National Disclosure Policy (NDP), to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom and other International countries are participants in the JSF Program.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD																	
B. Accomplishments/Planned Program (Breakout reflects USN, USAF, UK and other International funding)																			
<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: right;">2,478.456</td><td style="text-align: right;">3,686.640</td><td style="text-align: right;">3,859.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		2,478.456	3,686.640	3,859.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		2,478.456	3,686.640	3,859.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 50px;">FY03, FY04 and FY05 will continue System Development and Demonstration (SDD) or Air System with Lockheed Martin including International Commonality Effortexecution of the Air System including (ICE).</div>																			
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Accomplishments/Effort/Subtotal Cost		833.127	694.114	921.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 50px;">FY03, FY04 and FY05 will continue System Development and Demonstration (SDD) execution of the F135 Propulsion System with Pratt & Whitney including International Commonality Effort (ICE) and commence technology maturation efforts.</div>																			
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Accomplishments/Effort/Subtotal Cost		220.817	123.632	233.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 50px;">FY03, FY04 and FY05 continue the General Electric F136 development for a second, interchangeable, JSF engine for competition in production (previously begun in associated program elements 0603800N and 0603800F) and includes technology maturation efforts.</div>																			

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Exhibit R-2, RDTEN Budget Item Justification
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD		
B. Accomplishments/Planned Program (Cont.)				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		167.705	269.128	315.277
RDT&E Articles Quantity				
FY03, FY04 and FY05 will continue Systems Engineering (SE) and Mission Support activities, including modeling, simulation and analysis (MS&A) efforts, risk reduction activities and program office functions, and commence technology maturation efforts.				
GRAND TOTAL		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		3,700.105	4,773.514	5,328.277
RDT&E Articles Quantity				

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Exhibit R-2a, RDTEN Project Justification
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APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD

C. PROGRAM CHANGE SUMMARY:

Funding:	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Previous President's Budget:	1,708.900	2,171.736	2,226.004
Current President's Budget	1,661.509	2,159.197	2,264.507
Technical:	-47.391	-12.539	38.503
Summary of Adjustments			
Congressional program reductions		-55.000	
Congressional undistributed reductions		-24.339	
Congressional rescissions			
Congressional increases		66.800	
SBIR/STTR Transfer	-43.761		
Economic Assumptions			-6.969
Reprogrammings	-3.630		
Reprioritization			45.472
Other Adjustments			
Subtotal	-47.391	-12.539	38.503

Schedule:

Approximate 1-year schedule extension is expected.

Technical:

Additional design work is required to overcome airframe structural issues.

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APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME		
RDT&E, N / BA-5		0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM			D2261, JOINT STRIKE FIGHTER (JSF) SDD		
<p>D. OTHER PROGRAM FUNDING SUMMARY: This is a joint program with no executive service. Program Element 0604800F continues USAF development efforts budgeted in 0603800F prior to FY 2002. The United Kingdom and multiple other countries are participants in the SDD phase of JSF.</p>							
<u>RDT&E:</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>
0604800F	1,612.826	2,092.547	2,307.420	2,489.848	2,203.446	2,051.881	1,686.684
United Kingdom	161.000	200.000	356.000	384.500	355.200	266.300	85.000
Canada	13.770	5.240	5.700	5.670	4.030	2.170	1.200
Denmark	7.400	7.700	24.030	23.930	20.910	14.510	4.110
Netherlands	90.000	103.000	123.000	133.000	120.000	76.000	28.000
Norway	8.950	22.980	24.700	24.590	15.380	8.290	4.560
Italy	104.000	126.000	152.000	171.000	154.000	98.000	36.000
Turkey	25.700	28.700	31.200	31.000	22.100	11.900	6.500
Australia	14.950	28.150	39.720	29.740	14.430	8.010	5.000
<p><u>RELATED RDT&E:</u> Funding prior to JSF SDD (FY94-FY01): USN PE 0603800N \$1,950.617; USAF PE 0603800F \$1,907.352; DARPA PE 0603800E \$118.006; UK \$201.221; Multi-Lateral \$32.100; Canada \$10.600; and Italy \$10.000 for a total of \$4,229.896.</p>							
<u>RELATED PROCUREMENT:</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>
0214146N (Quantity)				61.564	680.509 (2)	2,715.237 (16)	4,791.696 (40)
0207142F (Quantity)				173.377	1,165.341 (6)	1,232.999 (8)	2,241.388 (18)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM			PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD			
			<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>RELATED SPARES AND REPAIR PARTS:</u>									
USN							30.754	150.527	342.425
<u>RELATED MILCON:</u>									
0207142F				19.060	9.965	0.000	0.000	85.402	79.998
91211F				1.000	0.900				
24146N				24.370					

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604800N, JOINT STRIKE FIGHTER (JSF) PROGRAM	PROJECT NUMBER AND NAME D2261, JOINT STRIKE FIGHTER (JSF) SDD

E. ACQUISITION STRATEGY:

Activities in the prior phase of JSF centered around three distinct objectives to provide a sound foundation for the start of SDD in Fall 2001:

- (1) facilitated the Services' development of fully validated, affordable operational requirements;
- (2) lowered risk by investing in and demonstrating key leveraging technologies that lowered the cost of development, production and ownership; and
- (3) demonstrated operational concepts.

Early warfighter and technologist interaction was an essential aspect of the requirements definition process, and achieved JSF affordability goals. To an unprecedented degree the JSF Program used cost-performance trades early, as an integral part of the weapon system development process. The Services defined requirements through an iterative process, balancing weapon system capability against life cycle cost at every stage. Each iteration of requirements was provided to industry. They evolved their designs and provided cost data back to the warfighters. The warfighters evaluated trades and made decisions for the next iteration. This iterative process produced iterations of the Services' Joint Interim Requirements Documents in 1995, 1997, 1998 and culminated in the approved joint Operational Requirements Document (ORD) in FY 2000.

A sizable technology maturation effort was conducted to reduce risk and life cycle cost (LCC) through technology maturation and demonstrations. The primary emphasis was on technologies identified as high payoff contributors to affordability, supportability, survivability, and lethality. Numerous demonstrations were accomplished to validate performance and life cycle cost impact to component, subsystem, and the total system.

In November 1996, contracts were awarded to Boeing and Lockheed Martin for Concept Demonstration Programs. These competing contractors built and flew concept demonstrator aircraft, conducted concept unique ground demonstrations, and refined their respective weapon system concepts. Specifically, Boeing and Lockheed Martin demonstrated commonality and modularity, STOVL hover and transition, and low speed handling qualities of their respective weapon system concepts. Pratt and Whitney provided propulsion hardware and engineering support. General Electric continued development of a second, interchangeable, engine for competition in production.

Following evaluation of proposals and a favorable Milestone B decision, the JSF Program entered SDD on 26 October 2001 with SDD contract awards to Lockheed Martin and Pratt & Whitney. The SDD plan reflects a block approach, based on open systems architecture, for accomplishing aircraft and weapons integration. General Electric continues propulsion development efforts.

Procurement of the USAF and USMC JSF variants is planned to begin in FY 2007 with advance procurement for Lot 1 in FY 2006.

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Exhibit R-3 Cost Analysis								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604800N, JOINT STRIKE FIGHTER (JSF) PROGRA			D2261, JOINT STRIKE FIGHTER SDD						
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 Hdw Develop - Air System	C/CPAF	Lockheed Martin, Ft. Worth TX	851.537	2,478.456	10/02	3,686.640	10/03	3,859.000	10/04	TBD	TBD	19,645.466
Award Fees (Non-Add -Budgeted)			(83.333)	(164.373)		(343.016)		(347.000)				
Award Fees (% Funded to Date)			100%	100%		4%						
Primary Hdw Develop - F135 Engine	SS/CPAF	Pratt & Whitney, Hartford CT	763.242	832.127	10/02	676.114	10/03	910.000	10/04	TBD	TBD	4,827.785
Award Fees (Non-Add -Budgeted)			(62.365)	(80.409)		(91.089)		(92.000)				
Award Fees (% Funded to Date)			100%	100%		10%						
Prim Hdw Dev	SS/BOA	Pratt & Whitney	8.312	1.000		18.000		11.000				
Subtotal SDD			1,623.091	3,311.583		4,380.754		4,780.000		TBD	TBD	
Primary Hdw Dev - F136 Eng Phase IIlb	SS/CPAF	General Electric, Cincinnati OH	26.921	220.817	10/02	123.632	10/03	24.000	10/04	TBD	TBD	453.497
Award Fees (Non-Add - Budgeted)			(8.001)	(12.155)		(15.386)		(6.000)				
Award Fees (% Funded to Date)			100%	100%								
Primary Hdw Dev - F136 Eng Phase IV	SS/TBD	General Electric						209.000		TBD		
Award Fees (Non-Add)												
System Eng/Mission Support	Various	Field Activities	79.778	139.391	10/02	236.127	10/03	285.934	10/04	TBD	TBD	
	Various	Miscellaneous	5.775	5.255	10/02	5.200	10/03	5.400	10/04	TBD	TBD	
	C/CPAF	Sverdrup/Anteon, Arlington VA	3.150	4.975	12/02	5.224	12/03	5.278	12/04	TBD	TBD	
	SS/CPFF	LSI/Veridian, Patuxent River MD	5.256	6.809	12/02	7.055	12/03	7.127	12/04	TBD	TBD	
Subtotal System Eng/Mission Support			93.959	156.430		253.606		303.739			TBD	
Subtotal Product Development			1,743.971	3,688.830		4,757.992		5,316.739		TBD	TBD	
Remarks: Dec 2002 SAR reflected total SDD cost of \$33B; current estimate TBD pending approval of revised Acquisition Program Baseline (APB) and December 2003 SAR. The GE Target Value of Contract reflects the negotiated value of the current Phase IIlb; follow-on contract for continued GE F136 development is TBD.												

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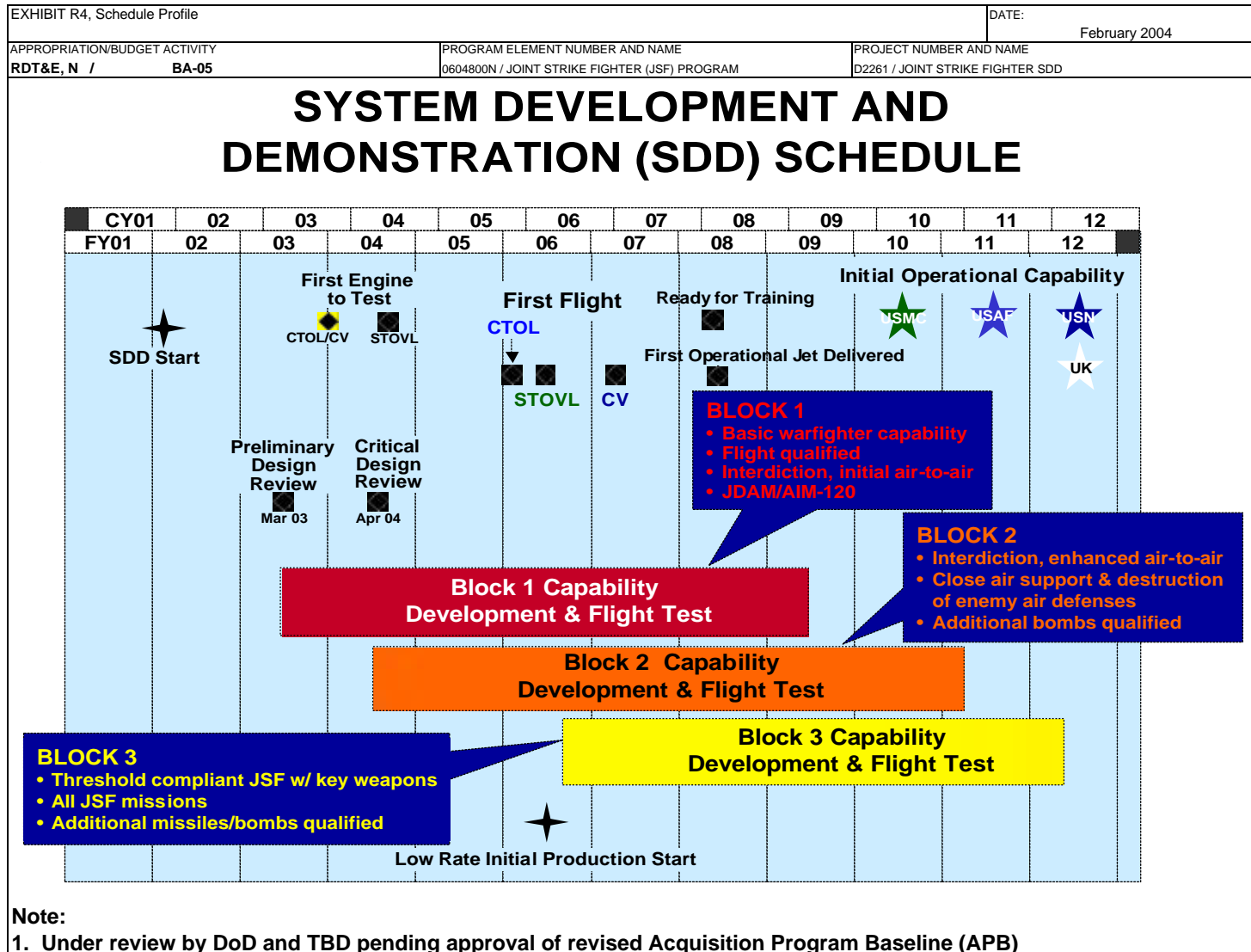
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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM				PROJECT NUMBER AND NAME D2261 / JOINT STRIKE FIGHTER SDD					
Cost Categories	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
Included in Product Development											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Program Mgmt Support	SS/CPFF	Stanley, Arlington VA	3.834	8.955	10/02	12.211	10/03	9.076	10/04	TBD	TBD	
	SS/CPFF	Aegis, Arlington VA	1.541	2.320	12/02	3.311	12/03	2.462	12/04	TBD	TBD	
Subtotal Management			5.375	11.275		15.522		11.538		TBD	TBD	
Remarks:												
Total Cost			1,749.346	3,700.105		4,773.514		5,328.277		TBD	TBD	
Remarks: Prior Years reflect \$ 722.898 USN / \$720.058 USAF / \$95.000 UK / \$211.390 Other International / Total \$1,749.346 FY 2003 reflects \$1,661.509 USN / \$1,612.826 USAF / \$161.000 UK / \$264.770 Other International / Total \$3,700.105 FY 2004 reflects \$2,159.197 USN / \$2,092.547 USAF / \$200.000 UK / \$321.770 Other International / Total \$4,773.514 FY 2005 reflects \$2,264.507 USN / \$2,307.420 USAF / \$356.000 UK/ \$400.350 Other International / Total \$5,328.277												

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Note:

1. Under review by DoD and TBD pending approval of revised Acquisition Program Baseline (APB)

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Exhibit R-4, Schedule Detail
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Exhibit R-3, Project Cost A3alysis
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Exhibit R-4a, Schedule Detail						DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT 0604800N / JOINT STRIKE FIGHTER (JSF) PROGRAM			PROJECT NUMBER AND NAME D2261 / JOINT STRIKE FIGHTER SDD				
Schedule Profile			FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone B and Award of SDD Contract									
Air System Requirements Review (ASRR)									
Integrated Baseline Reviews at Lockheed Martin, Pratt & Whitney and GE									
Preliminary Design Review (PDR) for Air System			3Q						
Critical Design Reviews (CDRs) for Three Variants				3Q	TBD				
CTOL First Flight						3Q			
STOVL First Flight						TBD			
CV First Flight							TBD		
First Operational Aircraft Delivered								TBD	
USMC Initial Operational Capability (IOC)									
USAF IOC									
USN IOC									
Milestone C									
<div>Note:</div> <div>1. TBD pending approval of revised Acquisition Program Baseline (APB)</div>									

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Exhibit R-4a, Schedule Detail
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