

# UNCLASSIFIED

EXHIBIT R-2, FY 2001 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET    DATE: February 2000

**BUDGET ACTIVITY: 5**                      **PROGRAM ELEMENT: 0604800N**                      **PROJECT NUMBER: E2261**  
**PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM**    **PROJECT TITLE: JSF E&MD**

**(U) COST (Dollars in thousands)**

<b>PROJECT NUMBER TITLE</b>	<b>FY 1999 ACTUAL</b>	<b>FY 2000 BUDGET</b>	<b>FY 2001 ESTIMATE</b>	<b>FY 2002 ESTIMATE</b>	<b>FY 2003 ESTIMATE</b>	<b>FY 2004 ESTIMATE</b>	<b>FY 2005 ESTIMATE</b>	<b>TO COMPLETE</b>	<b>TOTAL PROGRAM</b>
<b>E2261</b> JSF Engineering and Manufacturing Development (E&MD)	<b>0</b>	<b>0</b>	<b>\$295,962</b>	<b>\$1,324,045</b>	<b>\$1,932,487</b>	<b>\$1,859,938</b>	<b>\$1,639,111</b>	<b>TBD</b>	<b>TBD</b>

**Quantity of RDT&E Articles**    (Quantity of RDT&E Articles is a notional estimate pending source selection.)                      **10**                      **10**

December 1998 Selected Acquisition Report (SAR) reflected total E&MD cost estimate of \$19.8B (\$TY) funded by USN, USAF, and anticipated (but not finalized) foreign sources.

(U) 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, and USMC and allies, with optimum commonality among the variants 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 for the program.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ENGINEERING & MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

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EXHIBIT R-2a, FY 2001 RDT&E,N BUDGET PROJECT JUSTIFICATION SHEET DATE: February 2000

BUDGET ACTIVITY: 5

PROGRAM ELEMENT: 0604800N

PROJECT NUMBER: E2261

PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM

PROJECT TITLE: JSF E&MD

## (U) COST (Dollars in thousands)

<u>PROJECT NUMBER TITLE</u>	<u>FY 1999 ACTUAL</u>	<u>FY 2000 BUDGET</u>	<u>FY 2001 ESTIMATE</u>	<u>FY 2002 ESTIMATE</u>	<u>FY 2003 ESTIMATE</u>	<u>FY 2004 ESTIMATE</u>	<u>FY 2005 ESTIMATE</u>	<u>TO COMPLETE</u>	<u>TOTAL PROGRAM</u>
E2261 JSF Engineering and Manufacturing Development (E&MD)	0	0	\$295,962	\$1,324,048	\$1,932,487	\$1,859,938	\$1,639,111	TBD	TBD

**Quantity of RDT&E Articles** (Quantity of RDT&E Articles is a notional estimate pending source selection) **10** **10**

\* This program element continues development efforts budgeted in program element 0603800N prior to fiscal year 2001.

December 1998 Selected Acquisition Report (SAR) reflected total E&MD cost estimate of \$19.8B (\$TY) funded by USN, USAF, and anticipated (but not finalized) foreign sources.

(U) 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, and USMC and allies, with optimum commonality among the variants 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 for the program.

## (U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 1999 ACCOMPLISHMENTS: Not applicable.
2. FY 2000 PLAN: Not applicable.
3. FY 2001 PLAN: (Breakout reflects Navy and Air Force funding)

(U) (\$595,502) Prepare for and commence execution of E&MD for a tri-service family of aircraft, continue development of an alternate engine for production and provide mission support, including program office functions.

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Exhibit R-2a, RDT&E Project Justification  
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EXHIBIT R-2a, FY 2001 RDT&E,N BUDGET PROJECT JUSTIFICATION SHEET    DATE: February 2000

**BUDGET ACTIVITY: 5**

**PROGRAM ELEMENT: 0604800N**

**PROJECT NUMBER: E2261**

**PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM**

**PROJECT TITLE: JSF E&MD**

(U) B. PROGRAM CHANGE SUMMARY: (Dollars in thousands)

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
(U) FY 2000 President's Budget:			\$535,757
(U) Appropriated Value:			
(U) Adjustments from President's Budget:			-\$239,795
(U) FY 2001 President's Budget Submit:			\$295,962

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The FY 2001 decrease of \$239,795 thousand reflects a reduction of \$107,000 thousand transfer to JSF Pre-E&MD Program Element 0603800N, a \$130,000 thousand reduction due to JSF E&MD re-phasing, a \$2,018 thousand decrease for minor pricing and rate adjustments.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

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**EXHIBIT R-2, FY 2001 RDT&E,N BUDGET PROJECT JUSTIFICATION SHEET      DATE: February 2000**

**BUDGET ACTIVITY: 5**

**PROGRAM ELEMENT: 0604800N**

**PROJECT NUMBER: E2261**

**PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM**

**PROJECT TITLE: JSF E&MD**

(U) C. OTHER PROGRAM FUNDING SUMMARY: (Dollars in thousands) This is a joint program with no executive service. Foreign participation in E&MD is anticipated, but details are to be determined (TBD).

	<u>FY 1999 ACTUAL</u>	<u>FY 2000 BUDGET</u>	<u>FY 2001 ESTIMATE</u>	<u>FY 2002 ESTIMATE</u>	<u>FY 2003 ESTIMATE</u>	<u>FY 2004 ESTIMATE</u>	<u>FY 2005 ESTIMATE</u>	<u>TO COMPLETE</u>	<u>TOTAL PROGRAM</u>
(U) RDT&E 0604800F	0	0	\$299,540	\$1,321,726	\$1,927,241	\$1,853,319	\$1,631,937	TBD	TBD

(U) RELATED RDT&E:

<u>Appn</u>	<u>FY 1999 ACTUAL</u>	<u>FY 2000 BUDGET</u>	<u>FY 2001 ESTIMATE</u>	<u>FY 2002 ESTIMATE</u>	<u>FY 2003 ESTIMATE</u>	<u>FY 2004 ESTIMATE</u>	<u>FY 2005 ESTIMATE</u>	<u>TO COMPLETE</u>	<u>TOTAL PROGRAM</u>
(U) RDT&E 0603800N	\$471,290	\$239,907	\$131,566	0	0	0	0	0	\$1,742,506
(U) RDT&E 0603800F	\$456,137	\$249,088	\$129,538	0	0	0	0	0	\$1,695,723
(U) RDT&E 0603800E	0	0	0	0	0	0	0	0	\$118,006
(U) UNITED KINGDOM	\$34,096	\$26,101	0	0	0	0	0	0	\$200,291
(U) MULTI- LATERAL	\$7,500	\$5,100	\$1,700	0	0	0	0	0	\$32,100
(U) CANADA	\$3,000	\$2,700	\$600	0	0	0	0	0	\$10,600
(U) ITALY	\$10,000	0	0	0	0	0	0	0	\$10,000

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**BUDGET ACTIVITY: 5**

**PROGRAM ELEMENT: 0604800N**

**PROJECT NUMBER: E2261**

**PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM**

**PROJECT TITLE: JSF E&MD**

**(U) RELATED PROCUREMENT FUNDING:**

	FY 1999 <u>ACTUAL</u>	FY 2000 <u>BUDGET</u>	FY 2001 <u>ESTIMATE</u>	FY 2002 <u>ESTIMATE</u>	FY 2003 <u>ESTIMATE</u>	FY 2004 <u>ESTIMATE</u>	FY 2005 <u>ESTIMATE</u>	TO <u>COMPLETE</u>	TOTAL <u>PROGRAM</u>
(U) USAF 0207142F	0	0	0	0	0	\$18,000	\$587,308	TBD	TBD
(U) APN-1 0204800N	0	0	0	0	0	0	\$57,735	TBD	TBD

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

Ongoing pre-E&MD activities center around three distinct objectives that provide a sound foundation for the start of (E&MD) in fiscal year 2001:

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

Early warfighter and technologist interaction is an essential aspect of the requirements definition process, and key to achieving JSF affordability goals. To an unprecedented degree the JSF Program is using cost-performance trades early, as an integral part of the weapon system development process. The Services are defining requirements through an iterative process, balancing weapon system capability against life cycle cost at every stage. Each iteration of requirements is provided to industry. They evolve their designs and provide cost data back to the warfighters. The warfighters evaluate trades and make decisions for the next iteration. This process produced the Services' first Joint Initial Requirements Document (JIRD I) in 1995 and the second and third iterations in 1997 and 1998, respectively. The Services continue to refine their requirements through this process, which will culminate in the Joint Operational Requirements Document (JORD) in FY 2000 to support the Milestone II decision.

A sizable technology maturation effort is underway to reduce risk and life cycle cost (LCC) through technology maturation and demonstration. The primary emphasis is on technologies which have been identified as high payoff contributors to affordability, supportability, survivability, and lethality. Numerous demonstrations have been accomplished and others are in process to validate performance and life cycle cost impact to component, subsystem, and the total system.

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**PROJECT NUMBER: E2261**

**PROGRAM ELEMENT TITLE: JOINT STRIKE FIGHTER (JSF) PROGRAM      PROJECT TITLE: JSF E&MD**

(U) D. ACQUISITION STRATEGY: (Continued)

A multi-year \$2.2 billion JSF Concept Demonstration effort commenced in November 1996 with competitive contract awards to Boeing and Lockheed Martin for Concept Demonstration Programs. These competing contractors will build and fly concept demonstrator aircraft, conduct concept unique ground demonstrations, and continue refinement of their ultimate delivered weapon system concepts. Specifically, Boeing and Lockheed Martin will demonstrate commonality and modularity, STOVL hover and transition, and low speed handling qualities of their respective weapon system concepts. Pratt and Whitney is providing propulsion hardware and engineering support for both Boeing's and Lockheed Martin's on-going JSF Concept Demonstration efforts. The JSF Alternate Engine Program with General Electric, continues development of an alternate engine source for production.

Current program efforts will culminate in downselect to a single prime weapon system contractor for E&MD at Milestone II in FY 2001. JSF procurement (USAF variant) is planned to begin in FY 2005, with advance procurement for Lot 1 in FY04. Procurement for USMC variant begins with Lot 2 in FY06. Procurement of the Navy variant begins with Lot 4 in FY08.

(U) E. SCHEDULE PROFILE:

2 Qtr FY01    Milestone II and Award of E&MD Contract

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EXHIBIT R-3, FY 2001 RDT&E,N COST ANALYSIS

DATE: Feb 2000

BUDGET ACTIVITY: 5  
BUDGET ACTIVITY: 5

PROGRAM ELEMENT 0604800N USN  
PROGRAM ELEMENT 0604800F USAF

PROJECT NUMBER: E2261  
PROJECT NUMBER: TBD

PROJECT TITLE: JSF E&MD

<u>Cost Categories:</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior Yrs Cost</u>	<u>FY 1999 Cost</u>	<u>FY 1999 Award Date</u>	<u>FY 2000 Cost</u>	<u>FY 2000 Award Date</u>	<u>FY 2001 Cost</u>	<u>FY 2001 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
E&MD	TBD	TBD	0	0		0		595,502	TBD	TBD	TBD	TBD
<b>Subtotal Product Development</b>								595,502				
<b>Remarks:</b> Additional funding breakout is TBD pending source selection for JSF E&MD in FY 2001.												
<b>Subtotal Support</b>			0	0		0		0		0	0	
<b>Remarks:</b>												
<b>Subtotal Test &amp; Evaluation</b>			0	0		0		0		0	0	
<b>Remarks:</b>												
<b>Subtotal Management</b>			0	0		0		0		0	0	
<b>Remarks:</b>												
<b>Total Cost</b>			0	0		0		595,502		TBD	TBD	
Funding Resources*												
0604800N			0	0		0		295,962		TBD	TBD	
0604800F			0	0		0		299,540		TBD	TBD	
Total			0	0		0		595,502		TBD	TBD	

\* Excludes TBD anticipated Foreign Funding

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Exhibit R-3, RDT&E Cost Analysis  
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