CLASSIFICATION:

UNCLASSIFIED

| EXHIBIT R-2, RDT&E Budget Item Justification | | | | | | | DATE: | | |
|--|-------------|---------|---------|--------|-------------------|-----------------------|-----------|---------|--|
| | | | | | | | Februa | ry 2003 | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 ITEM NOMEN | CLATURE | • | | |
| RESEARCH DEVELOPMENT TEST & EVALUAT | ION, NAVY / | BA-5 | | | 0604618N; Joint D | irect Attack Munition | on (JDAM) | | |
| COST (\$ in Millions) | FY 2002 | FY 2008 | FY 2009 | | | | | | |
| Total PE Cost | 49.037 | 47.780 | 33.029 | 66.015 | 30.425 | 16.284 | 0.000 | 0.000 | |
| A2137/Joint Direct Attack Munition | 49.037 | 47.780 | 33.029 | 66.015 | 30.425 | 16.284 | 0.000 | 0.000 | |
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A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: JDAM is a joint acquisition program combining Department of Navy and Air Force requirements to upgrade existing General Purpose Bomb capabilities in adverse weather and at medium to high altitude releases. The upgrade is accomplished by the addition of a guidance tail kit to existing General Purpose Bombs (2000 lb and 1000 lb inventory bombs). The Air Force is the executive service. The Navy's participation in JDAM involves joint development of JDAM components and support of Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18. The program will incorporate commonality with the Joint Standoff Weapon where feasible.

The JDAM Joint Operational Requirements Document (JORD) was updated to include a requirement for a JDAM capability with the 500lb inventory bomb (MK82). The Air Force will continue to be the executive service for this effort. The Navy is participating in the joint development of the JDAM MK82 and support the Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18, utilizing a smart rack for additional weapon carriage.

The Navy JDAM Product Improvement Program (PIP) will integrate precision capabilites with the JDAM weapon system and the F/A-18 ATFLIR for preplanned and reactive strike missions. The JDAM PIP effort includes the development of a seeker Precision Guidance Set (PGS) which will be integrated with the JDAM tailkit and the F/A-18 aircraft with the Hornet Autonomous Real-time Targeting (HART) upgrade, capitalizing on the ATFLIR capabilites for reactive targeting.

R-1 SHOPPING LIST - Item No.

125

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Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 1 of 9)

CLASSIFICATION:

| EXHIBIT R-2a, RDT&E Project Justific | cation | | | | | | DATE: | | |
|--------------------------------------|-------------------|----------------------|----------------------|---------|---------|---------|---------------|---------|--|
| | | | | | | | February 2003 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | | | | | |
| RDT&E, N / BA-5 | 0604618N; Joint D | irect Attack Munitio | t Attack Munition (J | (JDAM) | | | | | |
| COST (\$ in Millions) | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | |
| Project Cost | 49.037 | 47.780 | 33.029 | 66.015 | 30.425 | 16.284 | 0.000 | 0.000 | |
| RDT&E Articles Qty | 35 | 5 | 12 | 93 | | | | | |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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35 Guided Test Vehicles (GTVs) were procured in FY 2002 for MK82 testing. Test articles procured in FY 2003 - FY 2005 are Guided test Vehicles (GTVs) for the JDAM PIP/HART integration testing.

R-1 SHOPPING LIST - Item No.

125

CLASSIFICATION:

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: |
|---|---|------------------------------|-----------------|
| | | | February 2003 |
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND N | IAME |
| RDT&E, N / BA-5 | 0604618N; Joint Direct Attack Munition (JDAM) | A2137/ Joint Direct Attack M | lunition (JDAM) |

B. Accomplishments/Planned Program

| | FY 02 | FY 03 | FY 04 | FY 05 |
|--|-------|-------|-------|-------|
| Complete JDAM MK83 testing and integration | 2.779 | | | |
| RDT&E Articles Quantity | | | | |

Completion of the end-to-end testing necessary to validate the JDAM MK83 performance within the Navy system, including operational testing on the F/A-18 C/D aircraft.

| | FY 02 | FY 03 | FY 04 | FY 05 |
|-------------------------------------|--------|--------|-------|-------|
| JDAM MK82 Development & Integration | 25.414 | 18.892 | | |
| RDT&E Articles Quantity | 35 | | | |

Navy participation in the joint JDAM MK82 development program, including integration of the weapon within the Navy environment, integration with the F/A-18 aircraft and the smart rack, Joint Mission Planning System (JMPS) module updates, systems engineering support, ILS, training and fleet introduction. Conduct MK-82 developmental and operational testing. The costs include the engineering, technical and administrative support to accomplish this program.

| | FY 02 | FY 03 | FY 04 | FY 05 |
|--|--------|--------|--------|--------|
| JDAM Product Improvement Program (PIP) | 20.844 | 28.888 | 33.029 | 66.015 |
| RDT&E Articles Quantity | | 5 | 12 | 93 |

JDAM PIP development, including development of a seeker Precision Guidance Set (PGS), F/A-18 C/D/E/F software development/integration/testing, JMPS module updates, test articles, ontractor and government engineering systems support, development and operational testing and evaluation, ILS, training and fleet introduction. The costs include the engineering, technical and administrative support to accomplish this program.

R-1 SHOPPING LIST - Item No.

125

Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, page 3 of 9)

CLASSIFICATION:

| | | | | | | February 2003 |
|--|-----------------------------------|---------------|---------|--------------------------|--------------------|---------------|
| PROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER | AND NAME | | PROJECT NUMBER A | ND NAME | |
| DT&E, N / BA-5 | 0604618N; Joint Direct Attack Mui | nition (JDAM) | | A2137/ Joint Direct Atta | ck Munition (JDAM) | |
| C. PROGRAM CHANGE SUMMARY: | | | | | | |
| Funding: | FY 2002 | FY 2003 | FY 2004 | FY 2005 | | |
| Previous President's Budget: | 55.767 | 48.861 | 35.964 | 33.804 | | |
| Current President's Budget | 49.037 | 47.780 | 33.029 | 66.015 | | |
| Total Adjustments | -6.730 | -1.081 | -2.935 | 32.211 | | |
| Summary of Adjustments | | | | | | |
| Congressional program reductions | | | | | | |
| Congressional undistributed reductions | | -0.289 | | | | |
| Congressional rescissions | -0.119 | | | | | |
| SBIR/STTR Transfer | -1.285 | | | | | |
| Economic Assumptions | -0.140 | -0.792 | -0.845 | -1.438 | | |
| Reprogrammings | -5.186 | | | | | |
| SPONSOR/FMB/NAVAIR Adjustments | | | -2.090 | 33.649 | | |
| Congressional increases | | | | | | |
| Subtotal | -6.730 | -1.081 | -2.935 | 32.211 | | |

Technical:

C/D and PIP/HART FOTE F/A-18C/D to the schedule.

R-1 SHOPPING LIST - Item No. 125

CLASSIFICATION:

| EXHIBIT R-2a, RDT&E | Project Justification | | | | | | | | DATE: | | |
|------------------------------|-----------------------|--------------------|-----------------|-----------------|----------------|---------|-------------------|----------------|---------------|----------|----------|
| | | | | | | | | | | February | y 2003 |
| APPROPRIATION/BUDGET | ACTIVITY | | PROGRAM ELEI | MENT NUMBER | R AND NAME | | PROJECT NUM | BER AND NA | ME | | |
| RDT&E, N / | BA-5 | | 0604618N; Joint | Direct Attack M | unition (JDAM) | 1 | A2137/ Joint Dire | ect Attack Mur | nition (JDAM) | | |
| D. OTHER PROGRA | M FUNDING SUMMARY: | | | | | | | | | To | Total |
| Line Item No. & Na | <u>ne</u> | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | Complete | Cost |
| PAN,MC/B.A1 / DERF - JDAM | Ammunition - JDAM | 301.780 162.500 | | 277.347 | 264.933 | 136.380 | 136.366 | 126.517 | 126.394 | | 1810.019 |

E. ACQUISITION STRATEGY:

The Joint Direct Attack Munition (JDAM) program acquisition strategy is derived from the 1994 Federal Acquisition Streamlining Act (FASA). The focus of the program is to reduce acquisition management costs by buying bomb modification kits as if they were commercial items, including obtaining waivers to regulations that affect the efficiency of the contracting process. The JDAM contracting officer has authority to approve individual deviations from any Federal Acquisition Regulation (FAR) and Defense Acquisition Regulation Supplement (DFARS) provision not required by Statute of Executive Order for the JDAM EMD contract. The contract management philosophy includes partnering with the contractor, long term relationships with vendors, negotiations based on prices instead of costs, credit for past performance, and allowing the contractor to determine how to produce the product with the government providing only what the product must do. Cost is an independent variable. JDAM kits have a lifetime (20 year) warranty, significantly reducing Operating and Support costs.

R-1 SHOPPING LIST - Item No.

125

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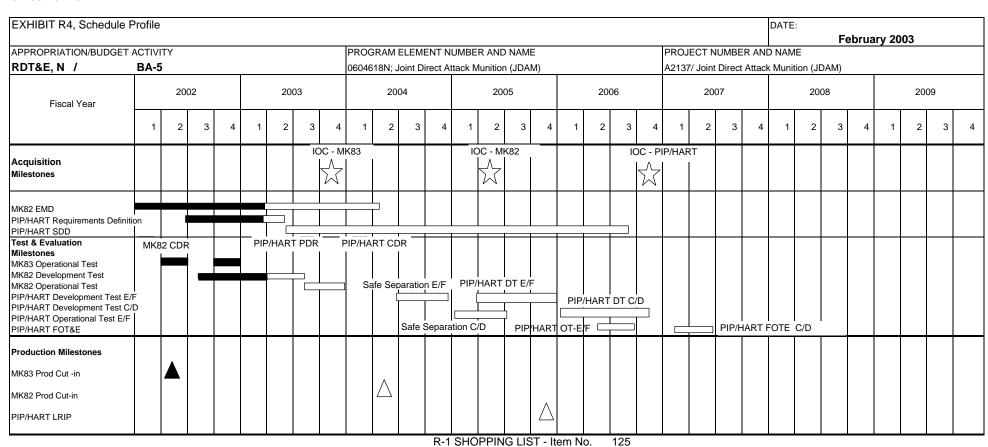
| | | | | | | | | | DATE: | | | | |
|---|----------|-----------------|---------------|----------|-----------------|---------|------------|------------|-----------------|-------|--------------|---------|--------------|
| Exhibit R-3 Cost Analysis (page | e 1) | | | | | | | | | | February 200 | 3 | |
| APPROPRIATION/BUDGET ACTIVI | TY | | PROGRAM EL | EMENT | | | PROJECT NU | MBER AND I | NAME | | | | |
| RDT&E, N / BA-5 | | | 0604618N; Joi | | k Munition (JDA | | | | Munition (JDAM) | | | | |
| Cost Categories | | Performing | | Total | | FY 03 | | FY 04 | | FY 05 | | | |
| | | Activity & | | | FY 03 | Award | | Award | | Award | | | Target Value |
| | & Type | Location | | Cost | Cost | Date | Cost | Date | Cost | Date | Complete | | of Contract |
| Primary Hardware Development | | Boeing, St. Lou | | 10.489 | | | | | | | | 10.489 | |
| Aircraft Integration | | Boeing, St. Lou | | 27.602 | | 02/03 | 11.292 | 02/04 | 21.397 | 02/05 | 16.991 | 88.468 | 88.468 |
| Award Fees | | Boeing, St. Lou | | 0.969 | | | | | | | | 0.969 | |
| Test Assets | SS/CPAF | Boeing, St. Lou | uis, MO | 22.914 | 2.378 | 02/03 | 1.702 | 02/04 | 15.695 | 02/05 | | 42.689 | 42.689 |
| Systems Engineering | WX | NAWC-WD, CI | hina Lake, CA | 59.840 | 10.230 | 11/02 | 3.811 | 11/03 | 9.483 | 11/04 | 7.125 | 90.489 | |
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| O hard Broder Broder was | | | | 101.011 | 00.704 | | 40.005 | | 10.575 | | 01.110 | 233.104 | |
| Subtotal Product Development | | | | 121.814 | 23.794 | | 16.805 | | 46.575 | | 24.116 | 233.104 | |
| | | | | | | | | | | | | | |
| Development Support - Misc | Various | Various | | 5.312 | | | | | | | | 5.312 | |
| Software Development - OFP | WX | AWL/CL | | 25.558 | | 12/02 | 7.939 | 12/.03 | 9.799 | 12/04 | 12.597 | 73.763 | |
| Software Development - Mission Planning | | Raytheon, Tucso | on A <i>7</i> | 8.477 | 0.677 | 12/02 | 1.335 | 12/03 | 1.323 | 12/04 | 0.294 | 12.106 | 12.106 |
| Contrare Development Ivilodien Flamming | 00/01/11 | raymoon, racce | 511, 712 | 0.477 | 0.011 | 12/02 | 1.000 | 12,00 | 1.020 | 12/01 | 0.254 | 12.100 | 12.100 |
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| Subtotal Support | | | | 39.347 | 18.547 | | 9.274 | | 11.122 | | 12.891 | 91.181 | |
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| Remarks: | | | | | | | | | | | | | |
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|-------------------------------------|----------|--------------------------|-----------------|----------------|-------|----------------|-----------------|-----------------|-------|--------------|---------|--------------|
| Exhibit R-3 Cost Analysis (pag | e 2) | | | | | | | | | February 200 |)3 | |
| APPROPRIATION/BUDGET ACTIVI | TY | PROGRAM EL | EMENT | | | PROJECT NU | MBER AND I | NAME | | • | | |
| RDT&E, N / BA-5 | | 0604618N; Joi | nt Direct Attac | k Munition (JD | AM) | A2137/ Joint D | Direct Attack N | Junition (JDAM) | | | | |
| Cost Categories | Contract | | Total | | FY 03 | | FY 04 | | FY 05 | | | |
| _ | Method | Activity & | PY s | FY 03 | Award | FY 04 | Award | FY 05 | Award | Cost to | Total | Target Value |
| | & Type | Location | Cost | Cost | Date | Cost | Date | Cost | Date | Complete | Cost | of Contract |
| Developmental Test & Evaluation | WX | NAWC/CL | 26.022 | 2.849 | 12/02 | 5.223 | 10/03 | 6.156 | 10/04 | 1.205 | 41.455 | |
| Operational Test & Evaluation | PD | OPTEVFOR, China Lake, CA | 3.714 | 0.616 | 12/02 | | | | | 5.320 | 9.650 | |
| Developmental Test & Evaluation - N | Various | Various | 5.056 | | | | | | | | 5.056 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Cubarral TOF | | | 24.702 | 2.405 | | 5 000 | | 0.450 | | 0.505 | 56.161 | |
| Subtotal T&E | | <u> </u> | 34.792 | 3.465 | | 5.223 | ļ | 6.156 | ļ | 6.525 | 56.161 | |
| | | | | | | | | | | | | |
| Contractor Engineering Support | Various | Various | 13.968 | 1.261 | 12/02 | 1.317 | 10/03 | 1.803 | 10/04 | 2.578 | 20.927 | |
| Travel | PD | JDAM | 1.730 | 0.185 | 10/02 | 0.110 | 10/03 | 0.110 | 10/04 | 0.220 | 2.355 | |
| Program Management Support | Various | Various | 6.348 | 0.528 | 03/03 | 0.300 | 03/04 | 0.249 | 03/05 | 0.379 | 7.804 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| SBIR Assessment | | | | | | | | | | | 04.000 | |
| Subtotal Management | | | 22.046 | 1.974 | | 1.727 | | 2.162 | | 3.177 | 31.086 | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 217.999 | 47.780 | | 33.029 | | 66.015 | | 46.709 | 411.532 | |
| Remarks: | | | | | | | | | | | | |

R-1 SHOPPING LIST - Item No. 125

CLASSIFICATION:



^{*} Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

| Exhibit R-4a, Schedule Detail | | | | | | DATE: | | | |
|-------------------------------|---------------|-------------------|---------------|---------|----------------|--|-------------|---------|--|
| | | | | | | ı | February 20 | 03 | |
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM EI | EMENT | | | PROJECT NU | | | | |
| RDT&BA-5 | 0604618N; Joi | int Direct Attacl | Munition (JDA | AM) | A2137/ Joint D | 137/ Joint Direct Attack Munition (JDAM) | | | |
| Schedule Profile | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | |
| MK83 Production Cut-in | 2Q | | | | | | | | |
| MK83 OT | 2Q - 4Q | | | | | | | | |
| MK82 DT | 3Q -4Q | 1Q | | | | | | | |
| MK82 OT | | 3Q | | | | | | | |
| MK83 IOC | | 4Q | | | | | | | |
| MK82 Production Cut-in | | | 2Q | | | | | | |
| PIP/HART SAFE SEPARATION E/F | | | 2Q-4Q | | | | | | |
| PIP/HART SAFE SEPARATION C/D | | | | 1Q-3Q | | | | | |
| PIP/HART DT - E/F | | | | 2Q-4Q | | | | | |
| PIP/HART LRIP | | | | 4Q | | | | | |
| PIP/HART DT C/D | | | | | 1Q-4Q | | | | |
| PIP/HART OT E/F | | | | | 2Q-3Q | | | | |
| PIP/HART IOC E/F | | | | | 4Q | | | | |
| PIP/HART FOTE C/D | | | | | | 1Q-2Q | | | |
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R-1 SHOPPING LIST - Item No.

125