|  | EXHIBIT R-2,    | RDT&E Budget Item | Justification |         |         | DATE:         |         |  |  |  |  |
|--|-----------------|-------------------|---------------|---------|---------|---------------|---------|--|--|--|--|
|  |                 |                   |               |         |         | February 2006 |         |  |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                  | R-1 ITEM NOMENC | LATURE            |               |         |         |               |         |  |  |  |  |
| RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / | 0604212N, OTHER | HELO DEVELOPME    | :NT           |         |         |               |         |  |  |  |  |
| COST (\$ in Millions)                          | FY 2005         | FY 2006           | FY 2007       | FY 2008 | FY 2009 | FY 2010       | FY 2011 |  |  |  |  |
| Total PE Cost                                  | 182.840         | 79.894            | 86.197        | 44.853  | 25.576  | 8.033         | 7.947   |  |  |  |  |
| 1109 CH/MH-53                                  | 2.305           | 2.429             | 2.514         | 2.596   | 2.652   | 2.717         | 2.783   |  |  |  |  |
| 2415 MH-60S DEVELOPMENT                        | 80.599          | 77.465            | 83.683        | 42.257  | 22.924  | 5.316         | 5.164   |  |  |  |  |
| 3059 CH-53E SLEP*                              |                 |                   |               |         |         |               |         |  |  |  |  |
| 9055 SH-60 LASER AIM SCORING SYSTEM (LASS)     |                 |                   |               |         |         |               |         |  |  |  |  |

\*Details for 3059 reported under Program Element 0605212N

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

1109 - The H-53 helicopter is the premier heavy lift helicopter for the Marine Corps and the only operational airborne mine sweeping platform for the Nawy. Through FY2011, H-53 efforts will continue to develop and qualify components, prior to production approval decisions, in order to replace obsolete system components. Emphasis will be placed on incorporating supportability improvement modifications thatwill sustain the H-53 aircraft through the year 2025 until the transition to the H-53X is complete. These efforts, combined, will significantly improve the readiness of the H-53 fleet while reducing long term operational and supportability costs. H-53 RDT&E efforts will focus on trade studies and risk reduction measures to identify candidate survivability. safety. avionics, caron handling, cockoit and other airframe specific improvements to extend the service life to 2025. 2415 - The Helicopter Combat Support (HC) mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR), Organic Airborne Mine Countermeasures (OAMCM) and Armed Helo. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission for the MH-60S. The AMCM mission will provide Carrier Strike Groups (CSGs) and Expeditionary Strike Groups (ESGs) with an OAMCM capability. The Armed Helo will provide Combat Search and Rescue (CSAR), Surface Warfare (SUW) and Maritime Interdiction Operations (MIO) to include Link 16. The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordanace Di

9055 - The Laser Aim Scoring System (LASS) provides real-time, quantitative feedback on critical aspects of laser guided weapon employment not currently available from existing Navy laser scoring systems. This feedback has been proven to significantly improve flight crew weapon delivery capabilities during nearly a decade of use by the U.S. Army. The system consists of three major components: A Base Station, Target Kit and Aircraft Flight Data Unit. LASS will be adapted to existing Navy seaborne target to support Navy H-60 armed helicopter training and readiness events requiring laser scoring capability.

|                               |               | DATE:        |              |            |         |         |              |      |  |  |  |
|-------------------------------|---------------|--------------|--------------|------------|---------|---------|--------------|------|--|--|--|
|                               | February 2006 |              |              |            |         |         |              |      |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY | AME           |              |              |            |         |         |              |      |  |  |  |
| RDT&E, N /                    | BA 5          | 0604212N, OT | THER HELO DI | EVELOPMENT | •       |         | H1109, CH/MI | H-53 |  |  |  |
|                               |               |              |              |            |         |         |              |      |  |  |  |
|                               |               |              |              |            |         |         |              |      |  |  |  |
| COST (\$ in Millions)         | FY 2005       | FY 2006      | FY 2007      | FY 2008    | FY 2009 | FY 2010 | FY 2011      |      |  |  |  |
| H1109 CH/MH-53                |               |              |              |            |         |         |              |      |  |  |  |
| RDT&E Articles Qty            |               |              |              |            |         |         |              |      |  |  |  |

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

The H-53 helicopter is the premier heavy lift helicopter for the Marine Corps and the only operational airborne mine sweeping platform for the Nawy. Through FY2011, H-53 efforts will continue to develop and qualify components, prior to production approval decisions, in order to replace obsolete system components. Emphasis will be placed on incorporating supportability improvement modifications that will sustain the H-53 aircraft through the year 2025 until the transition to the H-53X is complete. These efforts combined, will significantly improve the readiness of the H-53 fleet while reducing long term operational and supportability costs. H-53 RDT&E efforts will focus on trade studies and risk reduction measures to identify candidate survivability, safety, avionics, cargo handling, cockpit and other airframe specific improvements to extend the service life to 2025. Modeling and simulation will be used to the maximum practical extent throughout this effort. Manned Flight Simulator (MFS) will be utilized to develop, install and test interim modifications to existing H-53 legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete electromagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems.

Exhibit R-2a, RDTEN Project Justification (Exhibit R-2a, Page 2 of 21)

|                               | EXHIBI               | T R-2a, RDT&E Project Justification |  | DATE: |
|-------------------------------|----------------------|-------------------------------------|--|-------|
|                               |                      | February 2006                       |  |       |
| APPROPRIATION/BUDGET ACTIVITY | PROJECT NUMBER AND N | IAME                                |  |       |
| RDT&E, N /                    | H1109, CH/MH-53      |                                     |  |       |

### B. ACCOMPLISHMENTS / PLANNED PROGRAM:

|                    | FY 2005 | FY 2006 | FY 2007 |  |
|--------------------|---------|---------|---------|--|
| H-53 Avionics      | .407    | .357    | .339    |  |
| RDT&E Articles Qty |         |         |         |  |

Trade studies, risk reduction, design, development, model, integration and test activities for cockpit and avionics improvements for the H-53 avionics systems and associated subsystems.

Integrate software applique for cockpit and avionics improvements, to include the development of new sensors and the impact in flight control computers. Conduct Business Case Analyses to determine impact of high Operation and Support (O&S) cost drivers and address alternatives for obsolescence issues.

|                    | FY 2005 | FY 2006 | FY 2007 |  |
|--------------------|---------|---------|---------|--|
| H-53 Survivability | .361    | .168    | .171    |  |
| RDT&E Articles Qty |         |         |         |  |

Trade studies, risk reduction, design, development, model, integration and test activities for H-53 survivability systems to include effectiveness of the ballistic vulnerability (armor) package.

|                    | FY 2005 | FY 2006 | FY 2007 |  |
|--------------------|---------|---------|---------|--|
| H-53 Propulsion    | 1.053   | 1.217   | 1.259   |  |
| RDT&E Articles Qty |         |         |         |  |

Trade studies, risk reduction, design, development, integration and test activities for H-53 T64 engine and related systems.

|                            | FY 2005 | FY 2006 | FY 2007 |  |
|----------------------------|---------|---------|---------|--|
| Project Management Support | .484    | .538    | .556    |  |
| RDT&E Articles Qty         |         |         |         |  |

In-house, field activities, and contractors support of Integrated Product Teams (IPTs) to allow for studies and analyses, preparation of acquisition documentation and examination of equipment and axionics for the H-53. Efforts include, but are not limited to, government development support, engineering support, program management support, systems engineering and logistics support, and travel for the H-53 program.

|                    | FY 2005 | FY 2006 | FY 2007 |  |
|--------------------|---------|---------|---------|--|
| H-53 Airframe      | .000    | .149    | .189    |  |
| RDT&E Articles Qty |         |         |         |  |

Trade studies, risk reduction, design, development, integration and test activities for the H-53 airframe to include, but not limited to, main rotorhead, cowlings, aircraft structure, drive train, and various dynamic components.

|  | EXHIBIT | R-2a, RDT&E I | Project Justification |                         | DATE: |  |  |  |  |  |
|--|---------|---------------|-----------------------|-------------------------|-------|--|--|--|--|--|
|  |         |               |                       | February 20             |       |  |  |  |  |  |
| PPROPRIATION/BUDGET ACTIVITY           |         |               | EMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |       |  |  |  |  |  |
| RDT&E, N /                             | BA 5    | 0604212N, OTI | HER HELO DEVELOPMENT  | H1109, CH/MH-53         |       |  |  |  |  |  |
| C. PROGRAM CHANGE SUMMARY              |         |               |                       |                         |       |  |  |  |  |  |
| Funding:                               | FY 2005 | FY 2006       | FY 2007               |                         |       |  |  |  |  |  |
| Previous President's Budget:           | 2.381   | 2.466         | 2.531                 |                         |       |  |  |  |  |  |
| Current President's Budget:            | 2.305   | 2.429         | 2.514                 |                         |       |  |  |  |  |  |
| Total Adjustments                      | -0.076  | -0.037        | -0.017                |                         |       |  |  |  |  |  |
| Summary of Adjustments                 |         |               |                       |                         |       |  |  |  |  |  |
| Congressional Reductions               |         |               |                       |                         |       |  |  |  |  |  |
| Congressional Rescissions              |         |               |                       |                         |       |  |  |  |  |  |
| Congressional Undistributed Reductions | -0.033  | -0.026        |                       |                         |       |  |  |  |  |  |
| Congressional Increases                | 0.001   |               |                       |                         |       |  |  |  |  |  |
| Economic Assumptions                   |         | -0.011        | 0.012                 |                         |       |  |  |  |  |  |
| Miscellaneous Adjustments              | -0.044  |               | -0.029                |                         |       |  |  |  |  |  |
| Subtotal                               | -0.076  | -0.037        | -0.017                |                         |       |  |  |  |  |  |
|  |         |               |                       |                         |       |  |  |  |  |  |
|  |         |               |                       |                         |       |  |  |  |  |  |
| Schedule:                              |         |               |                       |                         |       |  |  |  |  |  |

Schedule slip due to emerging requirements in FY05 which forced the program office to defer the greater portion of the effort into 4th quarter FY06. In addition the complexity of the effort was greater than originally anticipated.

Technical:

Not Applicable

|  | EXHIBI        | T R-2a, RDT&E            | Project Justific          | cation                    |         |         |                                      | DATE: February 2006 |               |  |  |  |  |  |  |  |  |
|--|---------------|--------------------------|---------------------------|---------------------------|---------|---------|--------------------------------------|---------------------|---------------|--|--|--|--|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N /               | BA 5          | PROGRAM E<br>0604212N, O | LEMENT NUM<br>THER HELO D | BER AND NAM<br>EVELOPMENT | IE<br>· |         | PROJECT NUMBER AN<br>H1109, CH/MH-53 | ID NAME             | February 2006 |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
| D. OTHER PROGRAM FUNDING SUMMARY:<br>Not Applicable    | FY 2005       | FY 2006                  | FY 2007                   | FY 2008                   | FY 2009 | FY 2010 | FY 2011                              | To Complete         | Total Cost    |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
| E. ACQUISITION STRATEGY:                               |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
| This is a non-ACAT program with no specific acquisitio | n strategies. |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |
|  |               |                          |                           |                           |         |         |                                      |                     |               |  |  |  |  |  |  |  |  |

UNCLASSIFIED

R-1 Shopping List Item No 84

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, Page 5 of 21)

| Eyhibit D 2 Cost Apolysis (page 4)  |                     |   |  |                               |            |                              |                               |                              |                                    | Fahrers  | m, 2006   |        |
|---|---------------------|---|--|-------------------------------|------------|------------------------------|-------------------------------|------------------------------|------------------------------------|--|---|--------|
| Exhibit R-3 Cost Analysis (page 1) APPROPRIATION/BUDGET ACTIVITY  |                     | PROGRAM ELEMENT   |  |                               | ı          | DDO IECT N                   | NUMBER AN                     | DNAME                        |                                    | reprua   | ry 2006   |        |
| RDT&E, N /  | BA 5                | 0604212N, OTHER HELO DEVELOPMENT  |  |                               |            | H1109, CH/                   | -                             | DINAME                       |                                    |  |   |        |
| NDT&L, N /  | Contract            | 0004212N, OTHER TIELO DE VELOF WENT   | 1 1  |                               |            | 111109, 011/                 | WII 1-33                      |                              |                                    | 1  |   | Targe  |
|   | Method &            |   | Total PY s                                     | FY 2005                       | FY 2005    | FY 2006                      | FY 2006                       | FY 2007                      | FY 2007                            | Cost to  |   | Value  |
| Cost Categories   | Type                | Performing Activity & Location  | Cost   |                               | Award Date | Cost                         | Award Date                    | Cost                         | Award Date                         |  | Total Cost  | Contra |
| PRODUCT DEVELOPMENT   | турс                | Colonning Activity & Education  | 0031   | 0031                          | /wara bate | 0031                         | / Wara Date                   | 0031                         | /twara bate                        | Complete   | Total Cost  | Oonin  |
| Primary Hardware Development  | VARIOUS             | VARIOUS   | 1.097  | .053                          | Various    | .233                         | Various                       | .228                         | Various                            | Continuing   | Continuing  |        |
| Ancillary Hardware Development  |                     | VARIOUS   | 1.284  | .000                          | vanous     | .105                         | Various                       | .067                         | Various                            |  |   |        |
| Fraining Development  |                     | NAWCAD, PATUXENT RIVER MD   | .311   |                               |            | .100                         | Various                       | .007                         | Various                            | Continuing   |   |        |
| Systems Engineering   |                     | NAWCAD, PATUXENT RIVER MD   |  | .098                          | 1/15/2005  | .461                         | Various                       | .531                         | Various                            | Continuing   | -   |        |
| SUBTOTAL PRODUCT DEVELOPMEN   |                     |   | 2.692  | .151                          | 17 10/2000 | .799                         |                               | .826                         |                                    |  | Continuing  |        |
| Remarks:  |                     |   |  |                               |            |                              |                               |                              |                                    |  |   |        |
| SUPPORT   |                     |   |  |                               |            |                              |                               |                              |                                    |  |   |        |
| Developmental Support   |                     | NAWCAD, PATUXENT RIVER MD   | .406   | .595                          | Various    |                              |                               |                              |                                    | Continuing   | Continuing  |        |
| Software Development  | VARIOUS             | VARIOUS   | .327   |                               |            | .131                         | Various                       | .172                         | Various                            | Continuing   | Continuing  |        |
| Technical Data  | VARIOUS             | VARIOUS   | .194   |                               |            |                              |                               |                              |                                    |  | .194  |        |
| Studies & Analyses  | VARIOUS             | VARIOUS   | 2.754  |                               |            |                              |                               |                              |                                    | Continuing   | Continuing  |        |
|   | WY                  | NAWCAD, PATUXENT RIVER MD   | .125   |                               |            | .360                         | Various                       | .337                         | Various                            | Continuing   | Continuing  |        |
| GFE   | VVA                 | INAWOAD, I ATOXLINI KIVLK MD  | .120   |                               |            |                              |                               |                              |                                    |  | •   |        |
|   | VVX                 | IVAVVOAD, I ATOAENT RIVER WID   | 3.806  | .595                          |            | .491                         |                               | .509                         |                                    | Continuing   | Continuing  |        |
| SUBTOTAL SUPPORT  Remarks:  Developmental Test & Evaluation   | VARIOUS             | VARIOUS   | 3.806<br>1.635                                 | .595                          |            | .601                         | Various                       | .623                         |                                    | Continuing   | Continuing  |        |
| Remarks:  Developmental Test & Evaluation Departmental Test & Evaluation  | VARIOUS<br>WX       |   | 3.806  |                               | Various    |                              | Various                       |                              |                                    |  | Continuing .130   |        |
| Remarks:  Developmental Test & Evaluation Departional Test & Evaluation Live Fire Test & Evaluation (LFT&E)   | VARIOUS<br>WX       | VARIOUS<br>COMOPTEVFOR  | 3.806<br>1.635                                 | .595<br>.197<br>.197          | Various    |                              | Various                       |                              |                                    | Continuing   | Continuing .130   |        |
| Remarks:  Developmental Test & Evaluation Operational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION Remarks:   | VARIOUS<br>WX       | VARIOUS<br>COMOPTEVFOR  | 3.806<br>1.635<br>.130                         | .197                          | Various    | .601                         | Various                       | .623                         |                                    | Continuing   | Continuing .130 Continuing  |        |
| Remarks:  Developmental Test & Evaluation Operational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION Remarks:  MANAGEMENT   | VARIOUS<br>WX<br>WX | VARIOUS<br>COMOPTEVFOR<br>NAWCAD, PATUXENT RIVER MD                             | 1.635<br>.130<br>1.765                         | .197<br>.197                  |            | .601                         |                               | .623                         | Various                            | Continuing Continuing Continuing   | Continuing<br>.130<br>Continuing<br>Continuing                                    |        |
| Remarks:  Developmental Test & Evaluation Deparational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION  Remarks:  MANAGEMENT Govt Supt (Survivability - Des&Analysis)  | VARIOUS<br>WX<br>WX | VARIOUS COMOPTEVFOR NAWCAD, PATUXENT RIVER MD                                   | 1.635<br>.130<br>1.765                         | .197<br>.197                  | Various    | .601                         | Various                       | .623                         | Various                            | Continuing Continuing Continuing Continuing                                  | Continuing .130 Continuing Continuing   |        |
| Remarks:  Developmental Test & Evaluation Developmental Test & Evaluation Developmental Test & Evaluation Diversitional Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION Remarks:  MANAGEMENT Bovt Supt (Survivability - Des&Analysis) Program Management Support | VARIOUS<br>WX<br>WX | VARIOUS COMOPTEVFOR NAWCAD, PATUXENT RIVER MD NAWCAD, PATUXENT RIVER MD VARIOUS | 1.635<br>.130<br>1.765                         | .197<br>.197                  |            | .601<br>.601                 | Various<br>Various            | .623<br>.623                 | Various  Various  Various  Various | Continuing Continuing Continuing Continuing Continuing                       | Continuing .130 Continuing Continuing Continuing Continuing                       |        |
| Remarks:  Developmental Test & Evaluation Operational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION  Remarks:  MANAGEMENT Govt Supt (Survivability - Des&Analysis) Program Management Support Travel   | VARIOUS<br>WX<br>WX | VARIOUS COMOPTEVFOR NAWCAD, PATUXENT RIVER MD                                   | 1.635<br>.130<br>1.765<br>.180<br>.380<br>.706 | .197<br>.197<br>.1348<br>.014 | Various    | .601<br>.601<br>.129<br>.312 | Various<br>Various<br>Various | .623<br>.623<br>.141<br>.317 | Various                            | Continuing Continuing Continuing Continuing Continuing Continuing            | Continuing .130 Continuing Continuing Continuing Continuing Continuing Continuing |        |
| Developmental Test & Evaluation Operational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION  | VARIOUS<br>WX<br>WX | VARIOUS COMOPTEVFOR NAWCAD, PATUXENT RIVER MD NAWCAD, PATUXENT RIVER MD VARIOUS | 1.635<br>.130<br>1.765                         | .197<br>.197                  | Various    | .601<br>.601                 | Various<br>Various<br>Various | .623<br>.623                 | Various  Various  Various  Various | Continuing Continuing Continuing Continuing Continuing Continuing            | Continuing .130 Continuing Continuing Continuing Continuing                       |        |
| Remarks:  Developmental Test & Evaluation Deprational Test & Evaluation Live Fire Test & Evaluation (LFT&E) SUBTOTAL TEST & EVALUATION  Remarks:  MANAGEMENT Govt Supt (Survivability - Des&Analysis) Program Management Support Travel SUBTOTAL MANAGEMENT                                       | VARIOUS<br>WX<br>WX | VARIOUS COMOPTEVFOR NAWCAD, PATUXENT RIVER MD NAWCAD, PATUXENT RIVER MD VARIOUS | 1.635<br>.130<br>1.765<br>.180<br>.380<br>.706 | .197<br>.197<br>.1348<br>.014 | Various    | .601<br>.601<br>.129<br>.312 | Various<br>Various<br>Various | .623<br>.623<br>.141<br>.317 | Various Various Various Various    | Continuing Continuing Continuing Continuing Continuing Continuing Continuing | Continuing .130 Continuing Continuing Continuing Continuing Continuing Continuing |        |

Exhibit R-3, Project Cost Analysis (Exhibit R-3, Page 6 of 21)

# CLASSIFICATION:

| EXHIBIT R4, Schedule F  | Profile |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       | DATE  | :           | F | ebrua | rv 20 | 06 |  |  |
|---|---------|----|-----------------|--------------------|------------------------|-----------------|------|-----|----------------|---|---|----|----|---|------|---|---|-------|---------------|-------|-------|-------------|---|-------|-------|----|--|--|
| APPROPRIATION/BUDGET RDT&E, N /                                 | ACTIVI  | TY |                 |                    |                        |                 |      |     | UMBER<br>DEVEL |   |   |    |    |   |      |   |   | ECT N | NUMBE<br>H-53 | ER AN | D NAN | ΛE          |   |       | y     |    |  |  |
| 2005<br>Fiscal Year   |         |    | 2006            |                    |                        |                 | 2007 |     |                |   |   | 20 | 80 |   | 2009 |   |   | 2010  |               |       | 2011  |             |   |       |       |    |  |  |
| Fiscal Year 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     |    |  |  |
| Program<br>Milestones   |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Engineering<br>Milestones                                       |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Aircraft Survivability Assmt                                    |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Armor Threat Assessment & Selection Test                        |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Engine Armor Package  |         | 1  | 1               |                    |                        |                 |      | l   | 1              |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Cockpit Upgrade Architecture Selection                          |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Baseline Vulnerability Study                                    |         |    |                 |                    | 1                      |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| AFCS Computer   |         |    |                 |                    | 1                      |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Hydraulic & Electric Actuator Assessment Fuel Sponson Ballistic |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Vulnerability Assessment  |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |
| Obsolescence Issues/Studies                                     |         |    |                 |                    |                        |                 |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       | · · · · · · |   |       |       |    |  |  |
| Survivability Analysis  |         |    |                 |                    |                        |                 |      | l I |                |   | 1 |    |    | I | 1    |   | 1 | l I   |               | I     |       |             |   |       |       |    |  |  |
| Legacy P3I Efforts  |         |    |                 |                    |                        |                 |      | l   | -              | - | 1 |    |    | 1 | 1    | - |   | l     | 1             | 1     |       |             |   |       |       |    |  |  |
| T&E<br>Milestones   |         |    | Compl<br>Live-F | Alete In<br>ire Vu | itial Pha<br>Inerabili | se -<br>ty Test |      |     |                |   |   |    |    |   |      |   |   |       |               |       |       |             |   |       |       |    |  |  |

R-1 SHOPPING LIST - Item No. 84

# **CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail                   |         |         |         |            | DATE:       |             |         |  |  |  |  |
|---|---------|---------|---------|------------|-------------|-------------|---------|--|--|--|--|
|   |         |         |         |            | ı           | February 20 | 06      |  |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                   |         |         |         | PROJECT NU | IMBER AND N | AME         |         |  |  |  |  |
| RDT8BA-5  |         |         |         |            |             |             |         |  |  |  |  |
| Schedule Profile                                | FY 2005 | FY 2006 | FY 2007 | FY 2008    | FY 2009     | FY 2010     | FY 2011 |  |  |  |  |
| Aircraft Survivability Assessment               | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| Armor Threat Assessment & Selection Test        | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| Cockpit Upgrade Architecture Selection          | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| Baseline Vulnerability Study                    | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| Hydraulic & Electric Actuator Assessment        | 1Q-4Q   |         |         |            |             |             |         |  |  |  |  |
| Fuel Sponson Ballistic Vulnerability Assessment | 1Q-4Q   |         |         |            |             |             |         |  |  |  |  |
| Obsolescence Issues/Studies                     |         | 1Q-4Q   | 1Q-4Q   | 1Q-4Q      | 1Q-4Q       | 1Q-4Q       | 1Q-4Q   |  |  |  |  |
| Survivability Analysis                          |         | 1Q-4Q   | 1Q-4Q   | 1Q-4Q      | 1Q-4Q       | 1Q-4Q       | 1Q-4Q   |  |  |  |  |
| Legacy P3I Efforts                              |         | 1Q-4Q   | 1Q-4Q   | 1Q-4Q      | 1Q-4Q       | 1Q-4Q       | 1Q-4Q   |  |  |  |  |
| Engine Armor                                    | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| AFCE Obsolescence Study                         | 1Q-4Q   | 1Q-4Q   |         |            |             |             |         |  |  |  |  |
| Live Fire Vulnerability Test                    | 4Q      |         |         |            |             |             |         |  |  |  |  |

R-1 SHOPPING LIST - Item No. 84

|  | EXHIBIT    | R-2a, RDT&E | Project Justific | ation   |         |         |         |   | DATE:<br>February 2006 |
|--|------------|-------------|------------------|---------|---------|---------|---------|---|------------------------|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N / | MBER AND N | IAME        |                  |         |         |         |         |   |                        |
|  |            |             |                  |         |         |         |         |   |                        |
| COST (\$ in Millions)                    | FY 2005    | FY 2006     | FY 2007          | FY 2008 | FY 2009 | FY 2010 | FY 2011 |   |                        |
| 2415 MH-60S DEVELOPMENT                  | 80.599     | 77.465      | 42.257           | 22.924  | 5.316   | 5.164   |         | 1 |                        |
| RDT&E Articles Qty                       |            |             |                  |         |         |         |         |   |                        |

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

2415 - The Helicopter Combat Support (HC) mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR), Organic Airborne Mine Countermeasures (OAMCM) and Armed Helo. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission for the MH-60S. The AMCM mission will provide Carrier Strike Groups (CSGs) and Expeditionary Strike Groups (ESGs) with an OAMCM capability. The Armed Helo will provide Combat Search and Rescue (CSAR), Surface Warfare (SUW) and Maritime Interdiction Operations (MIO) to include Link 16. The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support.

| F-h 00                              |                                     |
|-------------------------------------|-------------------------------------|
| February 20                         | 106                                 |
| ER AND NAME PROJECT NUMBER AND NAME |                                     |
| EVELOPMENT 2415, MH-60S DEVELOPMENT |                                     |
|                                     | ER AND NAME PROJECT NUMBER AND NAME |

### B. ACCOMPLISHMENTS / PLANNED PROGRAM:

|   | FY 2005 | FY 2006 | FY 2007 |  |
|---|---------|---------|---------|--|
| Accomplishments / Effort / Sub-total Cost | 40.683  | 36.065  | 38.837  |  |
| RDT&E Articles Qty                        |         |         |         |  |

The design, development, integration and support of the AMCM unique items into the MH-60S airframe. Design, develop, integrate and support the interoperability of Automatic Flight Control System (AFCS). T&E on AMCM Mission Kits as each weapon system is introduced to the MH-60S. AMCM Training systems engineering and development; including training situation analysis, and instructional system development (ISD) documentation. Live Fire Test and Evaluation for the MH-60S program. Nawy field activity systems engineering, program management support and travel. Design, develop, integrate and support the Link 16 development (FY04 - cont.). Integrate Link16 training situation analysis, instructional system development (ISD) document (FY05 - cont.). RTOC inititatives: Improved organizational level oil analysis technology, replacement of flight control self retaining bolts (FY04-FY05), and weight reduction (FY04-FY05). Environmental Data Recorder effort for OAMCM (FY07).

|   | FY 2005 | FY 2006 | FY 2007 |  |
|---|---------|---------|---------|--|
| Accomplishments / Effort / Sub-total Cost | 39.916  | 41.400  | 44.846  |  |
| RDT&E Articles Qty                        |         |         |         |  |

Developmental efforts on the avionics architecture and systems of the MH-60S helicopter. Development of the operator consoles, as well as software modifications, to support AMCM sensors and palletized system. Nawy field activity systems engineering and test support, program management, and travel. Continue AMCM Training systems engineering and development; including training situation analysis, and instructional system development (ISD) documentation. AMCM sensor systems test and evaluation support (FY03 - continuing). Engineering and integration effort to incorporate AMCM requirements into the aircraft and ship C4I structure (FY04 - cont.). Design, develop, integrate and support the Link 16 development (FY04- cont.). Integrate Link16 training situation analysis, instructional system development (ISD) document (FY05 - cont.).

|  | EXHIBIT I | R-2a, RDT&E P | roject Justification | Di                      | ATE:          |
|--|-----------|---------------|----------------------|-------------------------|---------------|
|  |           |               | •                    |                         | February 2006 |
| APPROPRIATION/BUDGET ACTIVITY          | F         | PROGRAM ELE   | MENT NUMBER AND NAME | PROJECT NUMBER AND NAM  | IE .          |
| RDT&E, N /                             | BA 5 0    | 0604212N, OTH | ER HELO DEVELOPMENT  | 2415, MH-60S DEVELOPMEN |               |
|  |           |               |                      |                         |               |
| C. PROGRAM CHANGE SUMMARY              |           |               |                      |                         |               |
| Funding:                               | FY 2005   | FY 2006       | FY 2007              |                         |               |
| Previous President's Budget:           | 80.127    | 78.646        | 80.282               |                         |               |
| Current President's Budget:            | 80.599    | 77.465        | 83.683               |                         |               |
| Total Adjustments                      | 0.472     | -1.181        | 3.401                |                         |               |
| Summary of Adjustments                 |           |               |                      |                         |               |
| Congressional Reductions               |           |               |                      |                         |               |
| Congressional Rescissions              |           |               |                      |                         |               |
| Congressional Undistributed Reductions | -1.717    | -0.823        |                      |                         |               |
| Congressional Increases                | 0.018     |               |                      |                         |               |
| Economic Assumptions                   |           | -0.358        | 0.699                |                         |               |
| Miscellaneous Adjustments              | 2.171     |               | 2.702                |                         |               |
| Subtotal                               | 0.472     | -1.181        | 3.401                |                         |               |

#### Schedule:

AMCM - Initial Operating Capability (IOC) for Block 2A has been moved to 4th quarter FY07 per the program rebaseline approved by ASN(RD&A) on 4 April 05. IPR III has moved to third quarter FY06 to align with CT completion. Block 2B CDR has been rescheduled due to contract award delays resulting from program restructuring. AMCM Block 2A CT has been extended to address issues with CSTRS discovered during CT testing. As a result, DT and OT have been delayed. The schedule for 2B testing is reflecting overlap of CT/DT and DT/OT test periods for the three separate systems (OASIS, ALMDS, AMNS). OASIS, ALMDS & AMNS OT periods and RAMICS testing have been moved due to the reprogramming of the OAMCM program.

Link 16 - IPR I (completed) and Contractor Testing (CT) have been moved due to updated estimates associated with contract award. Contract award was delayed awaiting IPR I. As a result, IPR II and III and Developmental Testing (DT) and Operational Testing (OT) have been delayed. SDR, PDR and CDR have been moved one quarter each due to contract award delays.

Technical: N/A

|   | EXHIBIT                      | R-2a, RDT&E                  | Project Justific             | ation                        |                             |                             | DATE: February 2006               |                        |                                   |  |  |  |  |  |
|---|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------------|------------------------|-----------------------------------|--|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, N /  |                              | PROGRAM EL                   | _                            |                              |                             |                             | PROJECT NUMBE<br>2415, MH-60S DEV | R AND NAME             | -editially 2006                   |  |  |  |  |  |
| D. OTHER PROGRAM FUNDING SUMMARY:<br>017900 APN-1 MH-60S<br>AMCM (Included in numbers above)<br>060510 APN-6 MH-60S | FY 2005<br>394.790<br>10.523 | FY 2006<br>581.745<br>13.668 | FY 2007<br>548.559<br>17.115 | FY 2008<br>589.298<br>14.337 | FY 2009<br>755.239<br>3.444 | FY 2010<br>703.163<br>2.517 | FY 2011<br>717.270<br>3.628       | To Complete<br>873.681 | Total Cost<br>5,163.745<br>65.232 |  |  |  |  |  |

## E. ACQUISITION STRATEGY:

Airborne Mine Countermeasures (AMCM) and Armed Helo are elements of the existing MH-60S ACAT IC Program. MH-60S will employ an evolutionary acquisition approach via the MH-60S Block Upgrades. This allows for future modification for systems still in early development. The block upgrades will maximize commonality across all MH-60S missions and all AMCM/Armed Helo weapon systems, including logistics, training and maintenance. The MH-60S block upgrades are as follows.

- Block 1 Combat Support Helicopter
- Block 2- Airborne Mine Countermeasures
- Block 3 Armed Helo

Remarks:

|   |  |   |  |  |   |   |   |   | DATE:  |   |  |         |
|---|--|---|--|--|---|---|---|---|--|---|--|---------|
| Exhibit R-3 Cost Analysis (page 1)  |  |   |  |  |   |   |   |   |  | Februa  | ry 2006  |         |
| APPROPRIATION/BUDGET ACTIVITY   |  | PROGRAM ELEMENT   |  |  |   |   | NUMBER AN   |   |  |   |  |         |
| RDT&E, N /  | BA 5   | 0604212N, OTHER HELO DEVELOPMENT  |  |  |   | 2415, MH-6  | OS DEVELO   | PMENT   |  |   |  |         |
|   | Contract   |   |  |  |   |   |   |   |  |   |  | Target  |
|   | Method &   |   | Total PY s   | FY 2005  | FY 2005   | FY 2006   | FY 2006   | FY 2007   | FY 2007  | Cost to   |  | Value o |
| Cost Categories   | Type   | Performing Activity & Location  | Cost   | Cost   | Award Date  | Cost  | Award Date  | Cost  | Award Date   | Complete  | Total Cost   | Contrac |
| PRODUCT DEVELOPMENT   |  |   |  |  |   |   |   |   |  |   |  |         |
| GFE   | SS/FFP   | HONEYWELL TECH SOL INC, NM  | 1.100  | 1.250  | 6/10/2005   |   |   |   |  |   | 2.350  | 2.3     |
| Primary Hdw Development -AIRFRAME   |  | SIKORSKY AIRCRAFT, STRATFORD, CT  | 71.260   | 27.793   | 2/17/2005   |   | 12/30/2005  |   | 12/30/2006   | 17.354  | 160.687  | 160.6   |
| Primary Hdw Development -AVIONICS   | *SS/CPIF   | LOCKHEED MARTIN CORP, OWEGO, NY   | 75.668   | 32.142   | 1/12/2005   | 30.513  | 12/30/2005  | 30.730  | 12/30/2006   | 18.856  | 187.909  | 187.9   |
| Primary Hdw Development - CSTRS   | **SS/CPFF  | CONCURRENT TECHNOLOGIES CORP, PA  | 31.475   | 4.828  | VARIOUS   |   |   |   |  |   | 36.303   | 36.3    |
| Primary Hdw Development - CSTRS   | VARIOUS  |   |  | 1.365  | VARIOUS   |   |   | 3.397   |  | 2.842   | 9.424  |         |
| Training Development AIRFRAME   | WX/RX  | NAWCAD, PAX RIVER MD & NAWC TSD   | 1.068  | .050   | 11/30/2004  | .250  | 12/30/2005  | .250  | 12/30/2006   |   | 1.618  |         |
| Training Development AVIONICS   | WX/RX  | NAWCAD, PAX RIVER MD & NAWC TSD   | 1.068  | .050   | 11/30/2004  | .250  | 12/30/2005  | .250  | 12/30/2006   |   | 1.618  |         |
| All Product Dev Cost from FY97 - FY04   | VARIOUS  | VARIOUS   | 7.739  |  |   |   |   |   |  |   | 7.739  |         |
| SUBTOTAL PRODUCT DEV  |  |   | 189.378  | 67.478   |   | 56.190  |   | 55.550  |  | 39.052  | 407.648  |         |
| SUPPORT   | 1  | T   |  |  |   |   |   |   |  | <u> </u>  | Г  |         |
|   |  |   |  |  |   |   |   |   |  |   |  |         |
|   | IV/A DIOLIC  | IVADIOLIC   | 205  | 127  | V/ADIOLIS   | 125   | V/ADIOLIS   | 125   | MADIOLIS   | 225   | 007  |         |
|   |  | VARIOUS   | .285   | .137   |   |   |   | .125  |  | .325  | .997   |         |
| ILS - MSS (NON-FFRDC) AVIONICS  | VARIOUS  | VARIOUS   |  | .137   | VARIOUS   | .125  | VARIOUS   | .125  | VARIOUS  | .325  | .712   |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME  | VARIOUS<br>VARIOUS   | VARIOUS<br>VARIOUS  | 2.613  | .137<br>.365                                   | VARIOUS<br>11/30/2004   | .125<br>1.024   | VARIOUS<br>11/30/2005   | .125<br>1.051   | VARIOUS<br>11/30/2006  | .325<br>3.086   | .712<br>8.137  |         |
| ILS - MSS (NON-FFRDC) AVIONICS<br>Integrated Logistics Sup AIRFRAME<br>Integrated Logistics Sup AVIONICS  | VARIOUS<br>VARIOUS<br>VARIOUS  | VARIOUS<br>VARIOUS<br>VARIOUS   | 2.613<br>2.613   | .137<br>.365                                   | VARIOUS   | .125<br>1.024   | VARIOUS   | .125<br>1.051   | VARIOUS  | .325  | .712<br>8.137<br>8.137   |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME  | VARIOUS<br>VARIOUS   | VARIOUS<br>VARIOUS<br>VARIOUS   | 2.613  | .137<br>.365                                   | VARIOUS<br>11/30/2004   | .125<br>1.024   | VARIOUS<br>11/30/2005   | .125<br>1.051   | VARIOUS<br>11/30/2006  | .325<br>3.086   | .712<br>8.137  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:   | VARIOUS<br>VARIOUS<br>VARIOUS  | VARIOUS<br>VARIOUS<br>VARIOUS   | 2.613<br>2.613<br>4.172                                    | .137<br>.365<br>.365                           | VARIOUS<br>11/30/2004   | .125<br>1.024<br>1.024  | VARIOUS<br>11/30/2005   | .125<br>1.051<br>1.051  | VARIOUS<br>11/30/2006  | .325<br>3.086<br>3.086  | .712<br>8.137<br>8.137<br>4.172  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT Remarks:  | VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS   | VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS  | 2.613<br>2.613<br>4.172                                    | .137<br>.365<br>.365                           | VARIOUS<br>11/30/2004   | .125<br>1.024<br>1.024<br>2.297   | VARIOUS<br>11/30/2005<br>11/30/2005   | .125<br>1.051<br>1.051<br>2.351   | VARIOUS<br>11/30/2006<br>11/30/2006  | .325<br>3.086<br>3.086<br>6.821   | .712<br>8.137<br>8.137<br>4.172<br>22.155  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME   | VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS  | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS   | 2.613<br>2.613<br>4.172                                    | .137<br>.365<br>.365                           | VARIOUS<br>11/30/2004   | .125<br>1.024<br>1.024<br>2.297   | VARIOUS<br>11/30/2005<br>11/30/2005<br>VARIOUS  | .125<br>1.051<br>1.051<br>2.351   | VARIOUS<br>11/30/2006<br>11/30/2006<br>VARIOUS   | 3.25<br>3.086<br>3.086<br>6.821   | .712<br>8.137<br>8.137<br>4.172<br>22.155  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS  | VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS                              | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS   | 2.613<br>2.613<br>4.172                                    | .137<br>.365<br>.365<br>.365                   | VARIOUS<br>11/30/2004<br>11/30/2004   | .125<br>1.024<br>1.024<br>2.297   | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS   | .125<br>1.051<br>1.051<br>2.351<br>2.351  | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS  | .325<br>3.086<br>3.086<br>6.821   | .712<br>8.137<br>8.137<br>4.172<br>22.155  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & EVAL AIRFRAME   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX                             | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS NAWCAD, PATUXENT RIVER MD   | 2.613<br>2.613<br>4.172<br>9.682                           | .137<br>.365<br>.365<br>.365<br>1.004          | VARIOUS<br>11/30/2004<br>11/30/2004   | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598                          | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005                                     | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>.287  | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006  | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182                                  | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999   |         |
| LS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX                                  | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS NAWCAD, PATUXENT RIVER MD VARIOUS   | 2.613<br>2.613<br>4.172                                    | 1.37<br>.365<br>.365<br>1.004<br>1.250<br>.145 | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS                          | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947                  | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS                             | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>.287<br>2.970<br>.563                                   | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS   | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548                          | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615  |         |
| LS - MSS (NON-FFRDC) AVIONICS ntegrated Logistics Sup AIRFRAME ntegrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  FEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX WX                               | VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD  | 2.613<br>2.613<br>4.172<br>9.682                           | 1.004<br>1.250<br>1.250                        | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004            | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598         | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>11/30/2005 | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>2.970<br>.563<br>2.970                                  | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>12/30/2006   | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548<br>3.182                 | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999   |         |
| LS - MSS (NON-FFRDC) AVIONICS ntegrated Logistics Sup AIRFRAME ntegrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  FEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX WX WX                                    | VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS   | 2.613<br>2.613<br>4.172<br>9.682<br>7.413                  | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598<br>.947 | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>11/30/2005 | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>.287<br>2.970<br>.563                                   | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>12/30/2006   | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548                          | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615  |         |
| LS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval  | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX WX WX WX WX                              | VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA                              | 2.613<br>2.613<br>4.172<br>9.682                           | 1.004<br>1.250<br>1.250                        | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598<br>.947 | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>11/30/2005 | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>2.970<br>.563<br>2.970<br>.563                          | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>12/30/2006<br>VARIOUS   | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548<br>3.182                 | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615<br>.636  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval Oper Test & Eval   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX WX WX WX WX WX WX                        | VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA VARIOUS   | 2.613<br>2.613<br>4.172<br>9.682<br>7.413                  | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598<br>.947 | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>VARIOUS               | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>2.970<br>.563<br>2.970<br>.563                          | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>VARIOUS  | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548<br>3.182<br>.548         | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615<br>.636<br>2.076                                     |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval Oper Test & Eval Oper Test & Eval Oper Test & Eval AIRFRAME  | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX WX WX WX WX WX WX WX WX                     | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA VARIOUS  COMOPTEVFOR, NORFOLK VA                                 | 2.613<br>2.613<br>4.172<br>9.682<br>7.413                  | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598         | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS    | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>.287<br>2.970<br>.563<br>2.970<br>.563<br>2.076<br>.600 | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS               | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>.220<br>3.182<br>.548<br>3.182<br>.548 | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>.636<br>2.076<br>2.019  |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval Oper Test & Eval AIRFRAME   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA VARIOUS  COMOPTEVFOR, NORFOLK VA COMOPTEVFOR, NORFOLK VA         | 2.613<br>2.613<br>4.172<br>9.682<br>7.413<br>7.413         | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598<br>.947 | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS    | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>2.970<br>.563<br>2.970<br>.563<br>2.076<br>.600         | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>3.182<br>.548<br>3.182<br>.548         | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615<br>636<br>2.076<br>2.019                             |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval Oper Test & Eval AIRFRAME   | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA VARIOUS  COMOPTEVFOR, NORFOLK VA COMOPTEVFOR, NORFOLK VA VARIOUS | 2.613<br>2.613<br>4.172<br>9.682<br>7.413<br>7.413<br>.464 | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598         | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS    | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>.287<br>2.970<br>.563<br>2.970<br>.563<br>2.076<br>.600 | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>.220<br>3.182<br>.548<br>3.182<br>.548 | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615<br>.636<br>2.076<br>2.019<br>2.019<br>2.852          |         |
| ILS - MSS (NON-FFRDC) AVIONICS Integrated Logistics Sup AIRFRAME Integrated Logistics Sup AVIONICS All Support Cost from FY97 - FY04 SUBTOTAL SUPPORT  Remarks:  TEST & EVALUATION DT&E - ETS (NON-FFRDC) AIRFRAME DT&E - ETS (NON-FFRDC) AVIONICS Dev Test & Eval AIRFRAME Dev Test & Eval AVIONICS Dev Test & Eval AVIONICS Live Fire Test & Eval Oper Test & Eval AIRFRAME | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS WX | VARIOUS VARIOUS VARIOUS VARIOUS VARIOUS  VARIOUS  VARIOUS  VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCAD, PATUXENT RIVER MD VARIOUS  NAWCWD, CHINA LAKE CA VARIOUS  COMOPTEVFOR, NORFOLK VA COMOPTEVFOR, NORFOLK VA         | 2.613<br>2.613<br>4.172<br>9.682<br>7.413<br>7.413         | 1.250<br>1.250<br>1.45                         | VARIOUS<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>11/30/2004<br>VARIOUS<br>11/30/2004<br>VARIOUS | .125<br>1.024<br>1.024<br>2.297<br>.253<br>.253<br>2.598<br>.947<br>2.598         | VARIOUS<br>11/30/2005<br>11/30/2005<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>11/30/2005<br>VARIOUS<br>VARIOUS<br>VARIOUS    | .125<br>1.051<br>1.051<br>2.351<br>2.351<br>.287<br>2.970<br>.563<br>2.970<br>.563<br>2.076<br>.600         | VARIOUS<br>11/30/2006<br>11/30/2006<br>11/30/2006<br>VARIOUS<br>VARIOUS<br>12/30/2006<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS<br>VARIOUS | .325<br>3.086<br>3.086<br>6.821<br>.220<br>.220<br>.220<br>3.182<br>.548<br>3.182<br>.548 | .712<br>8.137<br>8.137<br>4.172<br>22.155<br>.760<br>.760<br>9.999<br>9.615<br>9.999<br>9.615<br>6.36<br>2.076<br>2.019<br>2.019<br>2.852<br>2.860 |         |

UNCLASSIFIED

R-1 Shopping List Item No 84

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, Page 13 of 21)

| Exhibit B. 2 Cost Analysis (page 1)                              |         |  |         |        |            |             |                |          | DATE:      | February | , 2006  |
|--|---------|--|---------|--------|------------|-------------|----------------|----------|------------|----------|---------|
| Exhibit R-3 Cost Analysis (page 1) APPROPRIATION/BUDGET ACTIVITY |         | PROGRAM ELEMENT  |         |        |            | PRO IECT N  | NUMBER AND     | NAME     |            | rebluary | 7 2000  |
| RDT&E. N /   |         | 0604212N. OTHER HELO DEVELOPMENT   |         |        |            |             | OS DEVELOPI    |          |            |          |         |
| 10102,117  | 2,10    | OCCUPATION OF THE CONTROL OF THE CON |         |        |            | 2110, 11110 | OO DE VEEO, II | VII. 111 |            |          |         |
| MANAGEMENT   |         |  |         |        |            |             |                |          |            |          |         |
| Contractor Eng Sup AIRFRAME                                      | VARIOUS | VARIOUS  | 3.296   | .540   | VARIOUS    | .250        | VARIOUS        | .250     | VARIOUS    | .228     | 4.564   |
| Contractor Eng Sup AVIONICS                                      | VARIOUS | VARIOUS  | 2.474   | .540   | VARIOUS    | .250        | VARIOUS        | .250     | VARIOUS    | .228     | 3.742   |
| Government Eng Sup AIRFRAME                                      | WX      | NAWCAD, PATUXENT RIVER MD  | 1.936   | .835   | 11/30/2004 | 1.189       | 11/30/2005     | 1.148    | 11/30/2006 | 2.464    | 7.572   |
| Government Eng Sup AIRFRAME                                      | WX      | NSWC, PANAMA CITY FL   | 2.091   | 2.315  | 11/30/2004 | 2.541       | 11/30/2005     | 3.700    | 11/30/2006 | 3.903    | 14.550  |
| Government Eng Sup AIRFRAME                                      | WX      | VARIOUS  | 7.126   |        |            | .320        | VARIOUS        | .477     | VARIOUS    | .379     | 8.302   |
| Government Eng Sup AVIONICS                                      | WX      | NAWCAD, PATUXENT RIVER MD  |         | .835   | 11/30/2004 | 1.189       | 11/30/2005     | 1.148    | 11/30/2005 | 2.464    | 5.636   |
| Government Eng Sup AVIONICS                                      | WX      | NSWC, PANAMA CITY FL   |         | 2.315  | 3/1/2005   | 2.541       | 11/30/2005     | 3.300    | 11/30/2006 | 3.903    | 12.059  |
| Government Eng Sup AVIONICS                                      | WX      | VARIOUS  | 7.126   |        |            |             | VARIOUS        | .477     | VARIOUS    | .379     | 8.301   |
| Program Mgmt CSS AVIONICS  | VARIOUS | VARIOUS  |         | .315   | VARIOUS    | .364        | VARIOUS        | .309     | VARIOUS    | 1.168    | 2.155   |
| Program Mgmt CSS AIRFRAME  | VARIOUS | VARIOUS  |         | .315   | VARIOUS    | .364        | VARIOUS        | .309     | VARIOUS    | 1.168    | 2.155   |
| Program Mgmt Govt Sup AIRFRAME                                   | WX      | VARIOUS  | 4.742   | .450   | VARIOUS    | .755        | VARIOUS        | .586     | VARIOUS    | 1.108    | 7.640   |
| Program Mgmt Govt Sup AVIONICS                                   | WX      | VARIOUS  | .838    | .450   | VARIOUS    | .755        | VARIOUS        | .586     | VARIOUS    | 1.108    | 3.736   |
| Travel AIRFRAME  | TO      | NAVAIR HQ, PATUXENT RIVER MD   | .445    | .125   | VARIOUS    | .150        | VARIOUS        | .125     | VARIOUS    | .400     | 1.245   |
| Travel AVIONICS  |         | NAVAIR HQ, PATUXENT RIVER MD   | .445    | .125   | VARIOUS    | .150        | VARIOUS        | .125     | VARIOUS    | .400     | 1.245   |
| All Management Cost from FY97 - FY04                             | VARIOUS | VARIOUS  | 7.897   |        |            |             |                |          |            |          | 7.897   |
| SUBTOTAL MANAGEMENT  |         |  | 38.415  | 9.157  |            | 11.137      |                | 12.790   |            | 19.299   | 90.797  |
| Remarks:   |         |  |         |        |            |             |                |          |            |          |         |
| Total Cost   |         |  | 256.400 | 80.599 |            | 77.465      |                | 83.683   |            | 75.661   | 573.807 |
| Remarks:   |         |  |         |        |            |             |                |          |            |          |         |

| CLASSIFICATION:   |         |         |                   |         |           |       |        |        |             |         |          |        |        |                 |             |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
|---|---------|---------|-------------------|---------|-----------|-------|--------|--------|-------------|---------|----------|--------|--------|-----------------|-------------|----------------|---|-----|-------------|---|------|--------|--------|--------|-------|-------|-----------|------------|---------|------|-------------|-----------|
| EXHIBIT R4, Schedule F  | Profile |         |                   |         |           |       |        |        |             |         |          |        |        |                 |             |                |   |     |             |   |      |        |        |        | DATE  | :     |           | ebrua      | 20      | O.E. |             |           |
| APPROPRIATION/BUDGET  | ACTIVI  | TY      |                   |         |           |       |        |        | PROG        | RAM E   | LEMEN    | NT NU  | JMBEI  | R AND           | NAME        |                |   |     |             |   | PROJ | ECT N  | UMBE   | R AND  | ) NAM | E     | <u> </u>  | ebrua      | ii y 20 | 03   |             |           |
| RDT&E, N /  | BA-     | 5       |                   |         |           |       |        |        | 06042       | 12N AS  | SW and   | l Othe | r Helo | Devel           | opmer       | t              |   |     |             |   | 2415 | MH-60  | S Deve | elopme | ent   |       |           |            |         |      |             |           |
| Fiscal Year   |         | 20      | 004               |         |           | 20    | 05     |        |             | 200     | 06       |        |        | 200             | )7          |                |   | 200 | 80          |   |      | 200    | 09     |        |       | 20    | 10        |            |         | 20   | 11          |           |
|   | 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         |
| Acquisition<br>Milestones                                     |         |         |                   |         |           |       |        |        |             | Bloc    |          |        |        | PR IV<br>ock 2B |             | IOC<br>Block 2 | A |     |             |   |      |        |        |        |       |       |           | FOO<br>AMC | М       |      |             |           |
| MH-60S AMCM<br>Aircraft Development                           |         |         |                   |         |           | :     | 2B PDF | 2B     | CDR         | FC      | A PC     | .A     |        |                 |             |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
| AMCM Mission Kits<br>CSTRS & Common Console                   | 2A G    | round   | Testing           |         |           |       |        | 2B     | Grn Tst     | (ALMDS  | , OASIS, | AMNS)  | )      | 2B G            | rn Tst (F   | AMICS)         |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
| Test & Evaluation<br>Milestones                               |         |         |                   |         |           |       | СТ     |        |             |         | DT-II    | С      | OT-II  | 2_              |             |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
| MH-60S AMCM<br>Block 2A                                       |         |         |                   | L       |           |       |        |        |             |         |          | СТ     |        |                 | DT          | -IID           |   | OT- | IID         |   |      |        |        |        |       |       |           |            |         |      |             |           |
| MH-60S AMCM *<br>Block 2B (ALMDS, OASIS, ANMS                 | ;)      |         |                   |         |           |       |        |        |             |         |          | I      |        |                 |             | ĺ              |   |     | СТ          |   |      | DT 115 |        |        | 07    |       |           |            |         |      |             |           |
| (RAMICS)  |         |         |                   |         |           |       |        |        |             |         |          |        |        |                 |             |                |   |     | 01          |   |      | DT-IIC | )      |        |       | Γ-IID |           |            |         |      |             |           |
| Production Milestones AMCM Mission Kits                       |         |         |                   |         |           |       |        |        |             |         |          |        |        |                 |             |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
| Contract Award  |         |         |                   |         |           |       |        |        | $\triangle$ |         |          |        |        |                 | $\triangle$ |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |
| Deliveries<br>CSTRS   | 2       |         | 3                 | 3       | <u>/3</u> |       |        |        |             |         | 2        |        |        |                 |             |                |   | 2   | <u>/2</u> \ | 2 | 3    | 3      | 3      | 2      | 4     | 3     | <u>/3</u> | <u>/3</u>  | 4       | 3    | <u>/3</u> \ | <u>/3</u> |
| Common Console  |         |         |                   | 3       | 3         |       | 4      |        |             |         |          |        |        | 2               |             |                |   |     |             |   | 2    | 2      | 1      | 1      | 3     | 3     | 3         | 2          | 4       | 3    | 3           | 3         |
| *Note: Block 2B time bar use<br>the three separate systems (0 | s slant | lines t | o depic<br>S, AMN | t the o | ver lap   | of CT | DT and | d DT/C | OT test     | periods | s for    |        |        |                 |             |                |   |     |             |   |      |        |        |        |       |       |           |            |         |      |             |           |

R-1 SHOPPING LIST - Item No. 84

| CLASSIFICATION:   |           |               |               |          |             |             |             |         |
|---|-----------|---------------|---------------|----------|-------------|-------------|-------------|---------|
| Exhibit R-4a, Schedule Detail                           |           |               |               |          |             | DATE:       |             |         |
| .,  |           |               |               |          |             |             | February 20 | 05      |
| APPROPRIATION/BUDGET ACTIVITY                           | PROGRAM E | I EMENT       |               |          | PROJECT NU  | IMBER AND N |             |         |
| RDT&BA-5  |           | W and Other H | elo Developme | ent      | 2415 MH-60S |             |             |         |
| Schedule Profile  | FY 2004   | FY 2005       | FY 2006       | FY 2007  | FY 2008     | FY 2009     | FY 2010     | FY 2011 |
| Block 2A  | 1 1 2001  | 1 1 2000      | 1 1 2000      | 1 1 2007 | 1 1 2000    | 1 1 2000    | 1 1 2010    | 112011  |
| Ground Testing  | 1Q        |               |               |          |             |             |             |         |
| Contractor Test   | 4Q        | 1Q-4Q         | 1Q-2Q         |          |             |             |             |         |
| Initial Production Delivery (Common Consoles & CSTRS)   |           | 1Q-3Q         |               |          |             |             |             |         |
| Functional Configuration Audit                          |           |               | 3Q            |          |             |             |             |         |
| Physical Configuration Audit                            |           |               | 4Q            |          |             |             |             |         |
| Developmental Testing (DT-IIC)                          |           |               | 2Q-4Q         | 1Q       |             |             |             |         |
| Operational Testing (OT-IIC)                            |           |               |               | 1Q-2Q    |             |             |             |         |
| Contract Award - LRIP                                   |           |               | 1Q            |          |             |             |             |         |
| Low Rate Production (LRIP) Decision /IPR III (Qty 2)    |           |               | 3Q            |          |             |             |             |         |
| Initial Operational Capability - Block 2A               |           |               |               | 4Q       |             |             |             |         |
| Low Rate Initial Production Delivery (Common Consoles & | CSTRS)    |               | 3Q            | 2Q       |             |             |             |         |
| Block 2B  |           |               |               |          |             |             |             |         |
| Ground Testing (ALMDS, OASIS, AMNS)                     |           |               | 2Q-4Q         | 1Q       |             |             |             |         |
| RAMICS Ground Testing                                   |           |               |               | 3Q-4Q    |             |             |             |         |
| PDR   |           | 3Q            |               |          |             |             |             |         |
| CDR   |           |               | 1Q            |          |             |             |             |         |
| Contractor Test   |           |               | 1Q-4Q         | 1Q-3Q    |             |             |             |         |
| Developmental Testing (DT-IID)                          |           |               |               | 2Q-4Q    | 1Q-2Q       |             |             |         |
| Operational Testing (OT-IID)                            |           |               |               | 4Q       | 1Q-4Q       |             |             |         |
| RAMICS Contractor Test                                  |           |               |               |          | 2Q-4Q       | 1Q          |             |         |
| RAMICS Developmental Testing (DT-IID)                   |           |               |               |          |             | 1Q-4Q       | 1Q          |         |
| RAMICS Operational Testing (OT-IID)                     |           |               |               |          |             |             | 1Q-3Q       |         |
| Full Rate Production (FRP) Decision / IPR IV            |           |               |               | 2Q       |             |             |             |         |
| Contract Award - Production                             |           |               |               | 3Q       |             |             |             |         |
| Full Rate Production Delivery (Common Consoles & CSTI   | RS)       |               |               |          | 2Q-4Q       | 1Q-4Q       | 1Q-4Q       | 1Q-4Q   |
| Full Operational Capability - Block 2B                  |           |               |               |          |             |             | 4Q          | 1       |

R-1 SHOPPING LIST - Item No. 84

| CLASSIFICATION:                           |       |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
|---|-------|----|----|---|---|-------|----------|---------|-------|-------|-------|--------|---------|-------|-------|----------|-------|-------|-----|-----|--------|-------|----------|--------|-------|----------|-----|-------|-------|-----|----|---|
| EXHIBIT R4, Schedule Profil               | е     |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          |       |       |     |     |        |       |          |        | DATE  | <u> </u> | F   | ebrua | rv 20 | 005 |    |   |
| APPROPRIATION/BUDGET ACT                  | IVITY |    |    |   |   |       |          |         | PROG  | RAM   | ELEM  | ENT N  | IUMBE   | R AND | D NAM | E        |       |       |     |     | PROJ   | ECT N | UMBE     | R ANI  | NAN C | ΛE       |     |       | ,     |     |    |   |
| RDT&E, N /                                | BA-5  | 5  |    |   |   |       |          |         | 06042 | 12N A | ASW a | nd Oth | er Held | Deve  | lopme | nt       |       |       |     |     | 2415 l | MH-60 | S Deve   | elopme | ent   |          |     |       |       |     |    |   |
| Fiscal Year                               |       | 20 | 04 |   |   | 20    | 005      | •       |       | 20    | 006   | •      |         | 20    | 07    |          |       | 20    | 800 |     |        | 200   | 09       |        |       | 20       | )10 |       |       | 20  | 11 |   |
|   | 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 |
| Acquisition<br>Milestones                 |       |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          | _     |       |     | 100 | 0 5    |       |          |        |       |          |     |       |       |     |    |   |
| (Block 3B)                                |       |    |    |   |   | IPR   | R 1      |         |       |       | IPR   |        |         |       |       |          | IPR 3 | 3     |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| MH-60S Block 3B Development               |       |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Design/Build/Integration                  |       |    |    |   |   | Desig | ın & Int | egratio | on    |       |       | 1      |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| MH-60S Block 3B Development<br>Milestones |       |    |    |   |   |       | SRI      | R SDF   | A PDR | CDR   |       |        |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Aircraft Block 3B Mod<br>Delivery         |       |    |    |   |   |       |          |         |       |       |       |        |         | Δ     |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Test & Evaluation<br>Milestones           |       |    |    |   |   |       |          |         |       |       |       | D1     | RR      | C     | TRR   |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Contractor Test                           |       |    |    |   |   |       |          |         |       |       | CT-I  | IJ     |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Development Test                          |       |    |    |   |   |       |          |         |       |       |       |        | DT-I    | IJ    | ۵,    | Γ-IIJ    |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
| Operational Test                          |       |    |    |   |   |       |          |         |       |       |       |        |         |       | ٢     | I-IIJ    |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
|   |       |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
|   |       |    |    |   |   |       |          |         |       |       |       |        |         |       |       |          |       |       |     |     |        |       |          |        |       |          |     |       |       |     |    |   |
|   | I     |    | ı  |   |   | ı     |          | 1       |       |       |       | R-1    | SHC     | PPIN  | G LIS | ST - Ite | em No | o. 84 |     |     |        |       | <u> </u> |        | ı     |          |     |       |       | 1   | ı  |   |

| CLASSIFICATION:                       |  |               |                |             |                         |            |                 |               |         |  |
|---------------------------------------|--|---------------|----------------|-------------|-------------------------|------------|-----------------|---------------|---------|--|
| CLASSIFICATION.                       |  |               |                |             |                         |            |                 |               |         |  |
| Exhibit R-4a, Sc                      | hedule Detail                              |               |                |             |                         |            | DATE:           |               |         |  |
|                                       |  |               |                |             |                         |            |                 | February 2005 |         |  |
| APPROPRIATION/BUDGET ACTIVITY PROJECT |  |               |                |             |                         | PROJECT NU | NUMBER AND NAME |               |         |  |
| RDT&E, N /                            | 0604212N AS                                | W and Other F | lelo Developme | ent         | 2415 MH-60S Development |            |                 |               |         |  |
| Schedule Profile                      | - Link 16                                  | FY 2004       | FY 2005        | FY 2006     | FY 2007                 | FY 2008    | FY 2009         | FY 2010       | FY 2011 |  |
| BLOCK 3B                              |  |               |                |             |                         |            |                 |               |         |  |
|                                       | IPR 1                                      |               | 2Q             |             |                         |            |                 |               |         |  |
|                                       | System Design, Build, and Integration      | 2Q-4Q         | 1Q-4Q          | 1Q-4Q       |                         |            |                 |               |         |  |
|                                       | Systems Requirements Review (SRR)          |               | 3Q             |             |                         |            |                 |               |         |  |
|                                       | System Design Review (SDR)                 |               | 4Q             |             |                         |            |                 |               |         |  |
|                                       | Preliminary Design Review (PDR)            |               |                | 1Q          |                         |            |                 |               |         |  |
|                                       | Software Readiness Review (SRR)            |               | 3Q             |             |                         |            |                 |               |         |  |
|                                       | Critical Design Review (CDR)               |               |                | 2Q          |                         |            |                 |               |         |  |
|                                       | Aircraft Block 3B Mod Delivery             |               |                |             | 2Q                      |            |                 |               |         |  |
|                                       | Contractor Test (CT-IIJ)                   |               |                | 3Q-4Q       | 1Q                      |            |                 |               |         |  |
|                                       | IPR 2                                      |               |                | 3Q          |                         |            |                 |               |         |  |
|                                       | Developmental Test Readiness Review (DTRR) |               |                |             | 1Q                      |            |                 |               |         |  |
|                                       | Developmental Testing (DT-IIJ)             |               |                |             | 1Q-3Q                   |            |                 |               |         |  |
|                                       | Operational Test Readiness Review (OTRR)   |               |                |             | 3Q                      |            |                 |               |         |  |
|                                       | Operational Testing (OT-IIJ)               |               |                |             | 3Q-4Q                   |            |                 |               |         |  |
|                                       | IPR 3                                      |               |                |             |                         | 1Q         |                 |               |         |  |
|                                       | IOC  |               |                |             |                         | 4Q         |                 |               |         |  |
|                                       |  |               |                |             |                         |            |                 |               |         |  |
|                                       |  |               |                |             |                         |            |                 |               |         |  |
|                                       |  |               |                |             |                         |            |                 |               |         |  |
|                                       |  |               |                |             |                         |            |                 |               |         |  |
|                                       |  |               |                |             |                         |            |                 |               |         |  |
|                                       |  | D 4 CLIOD     | DINICILICE     | Itara Na Od |                         |            |                 | -             | •       |  |

|   | EXHIBI* | T R-2a, RDT&E                    | Project Justific | ation   |         |   |                         |  | DATE:         |  |
|---|---------|----------------------------------|------------------|---------|---------|---|-------------------------|--|---------------|--|
|   |         |                                  | -                |         |         |   |                         |  | February 2006 |  |
| APPROPRIATION/BUDGET ACTIVITY               |         | PROGRAM ELEMENT NUMBER AND NAME  |                  |         |         |   | PROJECT NUMBER AND NAME |  |               |  |
| RDT&E, N /                                  | BA 5    | 0604212N, OTHER HELO DEVELOPMENT |                  |         |         | 9055, SH-60 LASER AIM SCORING SYSTEM (LASS) |                         |  |               |  |
|   |         |                                  |                  |         |         |   |                         |  |               |  |
|   |         |                                  |                  |         |         |   |                         |  |               |  |
| COST (\$ in Millions)                       | FY 2005 | FY 2006                          | FY 2007          | FY 2008 | FY 2009 | FY 2010                                     | FY 2011                 |  |               |  |
| H9055 SH-60 LASER AIM SCORING SYSTEM (LASS) | .903    |                                  |                  |         |         |   |                         |  |               |  |
| RDT&E Articles Qty                          |         |                                  |                  |         |         |   |                         |  |               |  |
|   |         |                                  |                  |         |         |   |                         |  | -             |  |

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Sea Target Laser Aim Scoring System (STLASS) provides real-time, quantitative feedback on critical aspects of laser guided weapon employment not currently available from existing Navy laser scoring systems. This feedback has been proven to significantly improve flight crew weapon delivery capabilities during nearly a decade of use by the U.S. Army. The system consists of three major components: A Base Station, Target Kit and Aircraft Flight Data Unit. STLASS will be adapted to existing Navy seaborne targets to support Navy H-60 armed helicopter training and readiness events requiring laser scoring capability.

|                               | EXHIE | DATE:                            |                          |                      |
|-------------------------------|-------|----------------------------------|--------------------------|----------------------|
|                               |       |                                  |                          | February 2006        |
| APPROPRIATION/BUDGET ACTIVITY |       | PROGRAM ELEMENT NUMBER AND NAME  | PROJECT NUMBER AND N     | IAME                 |
| RDT&E, N /                    | BA 5  | 0604212N, OTHER HELO DEVELOPMENT | 9055, SH-60 LASER AIM SO | CORING SYSTEM (LASS) |
|                               |       |                                  |                          |                      |

#### B. ACCOMPLISHMENTS / PLANNED PROGRAM:

|   | FY 2005 | FY 2006 | FY 2007 |  |
|---|---------|---------|---------|--|
| Accomplishments / Effort / Sub-total Cost | .903    |         |         |  |
| RDT&E Articles Qty                        |         |         |         |  |

Continue the design and development efforts required for adaptation of a STLASS base station, target and flight data unit to Navy H-60 configuration requirements.

### C. PROGRAM CHANGE SUMMARY

 Funding:
 FY 2005
 FY 2006
 FY 2007

 Previous President's Budget:
 0.922
 0.000
 0.000

 Current BES / President's Budget:
 0.903
 0.000
 0.000

 Total Adjustments
 -0.019
 0.000
 0.000

Summary of Adjustments

Congressional Reductions Congressional Rescissions

Congressional Undistributed Reductions

Congressional Increases Economic Assumptions

Miscellaneous Adjustments

Subtotal -0.019 0.000 0.000

-0.019

Schedule: Not Applicable

Technical: Not Applicable

|   | EXHIBI*  | ΓR-2a, RDT&E Project Justification  |  |  | DATE:   | February 2006 |
|---|--|---|--|--|---|---------------|
| APPROPRIATION/BUDGET ACTIVITY   |  | PROGRAM ELEMENT NUMBER AND NAME   |  | PROJECT NUMBER AND NA  | AME   |               |
| RDT&E, N /  | BA 5   | 0604212N, OTHER HELO DEVELOPMENT  |  | 9055, SH-60 LASER AIM SC   | ORING SYSTEM (LASS)   |               |
| D. OTHER PROGRAM FUNDING SUMMARY:<br>APN BLI-053000 H-60 Series   | FY 2005<br>30.575                                      | FY 2006 FY 2007 FY 2008<br>12.206 33.113 23.306   | FY 2009 FY 2010<br>24.097 23.468                           | FY 2011<br>5 17.012  | To Complete Total Cost 100.173 263.947                                |               |
|   |  |   |  |  |   |               |
| E. ACQUISITION STRATEGY: FY05 RDT&E funding effectiveness in designating targets with Laser energifleet training funds. | g provided for Laser <i>i</i><br>y through a forward l | Aim Scoring System. The program will develo<br>ooking infrared. The system will track effective | p an aircrew training syste<br>reness and tactical profici | em which provides real-time fe<br>ency. If system proves effecti | edback to H-60 flight crews on the ve, units may be purchased through |               |
|   |  |   |  |  |   |               |
|   |  |   |  |  |   |               |
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