

# UNCLASSIFIED

CLASSIFICATION: Unclassified

|   |         |         |         |         |   |         |                        |         |
|---|---------|---------|---------|---------|---|---------|------------------------|---------|
| EXHIBIT R-2, RDT&E Budget Item Justification  |         |         |         |         |   |         | DATE:<br>February 2003 |         |
| APPROPRIATION/BUDGET ACTIVITY<br>RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5  |         |         |         |         | R-1 ITEM NOMENCLATURE<br>0604366N/STANDARD MISSILE IMPROVEMENTS |         |                        |         |
| COST (\$ in Millions)   | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007 | FY 2008                | FY 2009 |
| Total PE Cost   | 13.574  | 20.819  | 76.927  | 100.683 | 189.229   | 191.916 | 213.595                | 207.216 |
| K0439/Standard Missile Improvements   | 1.224   | 15.929  | 42.717  | 50.683  | 23.036  | 0.986   | 0.940                  | 0.932   |
| K2639/Standard Missile Improvements   | 12.350  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000                  | 0.000   |
| K3092/Standard Missile 5 Program  | 0.000   | 4.890   | 34.210  | 50.000  | 166.193   | 190.930 | 212.655                | 206.284 |
|   |         |         |         |         |   |         |                        |         |
| Defense Emergency Response Funds (DERF) Funds: No DERF funds are associated with this program/project.  |         |         |         |         |   |         |                        |         |
| A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:<br>"...The following capabilities are required:<br>"...(6) Effective weapon systems that will deliver timely lethal firepower to the threat systems and supporting structures in hostile territory, provide in-flight destruction capabilities over the total flight path, and provide continuous protection to forward deployed maneuver forces as well as theater rear assets."<br>-Mission Need Statement for Joint Theater Air and Missile Defense, May 1999<br>"Six critical operational goals...<br>"Projecting and sustaining U.S. forces in distant anti-access or area-denial environments and defeating anti-access and area-denial threats;<br>"Defenses against known and emerging threats must be developed. |         |         |         |         |   |         |                        |         |

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 1 of 28)

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| EXHIBIT R-2, RDT&E Budget Item Justification  |   | DATE:<br><b>February 2003</b> |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /BA-5</b>  | R-1 ITEM NOMENCLATURE<br>0604366N/STANDARD MISSILE IMPROVEMENTS |                               |
| <p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>“The United States must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition</p> <p>“The QDR emphasizes the need for new investments that would enable U.S. forces to defeat anti-access and area-denial threats and to operate effectively in critical areas.”</p> <p>- Quadrennial Defense Review Report, September 30, 2001</p> <p>Standard Missile-2 (SM-2) Block IIIB is the Navy's premier Anti-Air Warfare (AAW) missile, providing both area air defense for the fleet and self defense for individual Aegis CGs and DDGs, as required by the Joint TAMD MNS, DPG, QDR, and Ship Class AAW Self Defense Capstone Requirements Document. Minor agility, fuzing, and computer modifications to SM-2 Block IIIB are under development to restore performance in the near term against a specific existing proliferated ASCM threat. Continuous analysis of missile capabilities vs. ever-evolving and proliferating aircraft and anti-ship cruise missiles and long-range planning are required to keep pace with the threat. A separate, classified, advanced technology effort will begin to transition in FY03, and in FY04 a new program will start to develop a family of advanced surface missile systems. These new missile systems will leverage the Navy investment in the Aegis Weapon System, CEC, and airborne early warning systems, which will be upgraded in concert with missile development to support a fully integrated extended range detect-to-engage capability. Funding for those upgrades are also included in this line. Together, this family of systems will provide the air superiority and the umbrella of protection against the full spectrum of projected future cruise missile (anti-ship and land attack) and manned aircraft threats discussed in the Joint TAMD MNS, DPG, QDR, and TAMD Capstone Requirements Document.</p> |   |                               |

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 2 of 28)

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## CLASSIFICATION:

|   |         |   |         |         |  |         |                               |         |
|---|---------|---|---------|---------|--|---------|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |  |         | DATE:<br><b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS |         |         | PROJECT NUMBER AND NAME<br>K0439 Standard Missile Improvements |         |                               |         |
| COST (\$ in Millions)                                       | FY 2002 | FY 2003   | FY 2004 | FY 2005 | FY 2006  | FY 2007 | FY 2008                       | FY 2009 |
| Project Cost  | 1.224   | 15.929  | 42.717  | 50.683  | 23.036   | 0.986   | 0.940                         | 0.932   |
| RDT&E Articles Qty  |         |   |         |         |  |         |                               |         |

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

Minor modifications to SM-2 Block IIIB will restore performance in the near term against a specific existing proliferated ASCM threat. These include modifications to the MK45 Target Detection Device (TDD) to improve the lethal radius at low altitudes, guidance software to improve missile agility, and a new digital signal processor. Funding for the MK 45 Mod 14 TDD advanced technology development has been provided under Conventional Munitions, P.E. 0603609N, Project K1821, and the complementary engineering and transition to production efforts is funded in this line. Continuous analysis of missile capabilities vs. evolving and proliferating aircraft and anti-ship cruise missiles and long-range planning are required to keep pace with the threat. A separate, classified, advanced technology effort will begin to transition in FY03, and in FY06 a new program will start to develop a family of advanced surface missile systems. The Aegis Weapon System, CEC, and airborne early warning systems also will be upgraded in concert with missile development to support a fully integrated extended range detect-to-engage capability.

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| EXHIBIT R-2a, RDT&E Project Justification  |   |  | DATE:<br><b>February 2003</b> |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
|--|---|--|-------------------------------|--------|--|-------|-------|-------|-------|--------------------------------------|-------|--------|--------|--------|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K0439 Standard Missile Improvements |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <b>B. Accomplishments/Planned Program</b>  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.224</td><td style="text-align: center;">0.951</td><td style="text-align: center;">4.811</td><td style="text-align: center;">1.868</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>    |   |  |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 1.224 | 0.951  | 4.811  | 1.868  | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 1.224   | 0.951  | 4.811                         | 1.868  |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">SM-2 Block IIIB MK 45 Mod 14 TDD. FY02: Engineering and transition to production<br/>FY 03: Round level integration engineering and transition to production<br/>FY 04: Transition to production and flight testing<br/>FY 05: Completion of flight testing and analysis</div>   |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.145</td><td style="text-align: center;">0.396</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>    |   |  |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 0.000 | 0.000  | 0.145  | 0.396  | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 0.000   | 0.000  | 0.145                         | 0.396  |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Failure analyses, technology assessments, analyses of missile capability vs. threat, and long-range planning to keep pace with the evolving and proliferating threat.</div>  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">14.978</td><td style="text-align: center;">31.965</td><td style="text-align: center;">39.973</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> |   |  |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 0.000 | 14.978 | 31.965 | 39.973 | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 0.000   | 14.978   | 31.965                        | 39.973 |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Advanced Surface Missile Demonstration. FY03: Transition advanced technology to Advanced Surface Missile System<br/>FY04 and FY05: Continue transition of advanced technology, program definition, risk reduction, and preparation for feasibility demo</div>  |   |  |                               |        |  |       |       |       |       |                                      |       |        |        |        |                         |  |  |  |  |

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| EXHIBIT R-2a, RDT&E Project Justification   |   |  | DATE:<br><b>February 2003</b> |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
|---|---|--|-------------------------------|-------|--|-------|-------|-------|-------|--------------------------------------|--|--|-------|-------|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K0439 Standard Missile Improvements |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| <b>B. Accomplishments/Planned Program (Cont.)</b>   |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td style="text-align: center;">5.796</td><td style="text-align: center;">8.446</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 10px; margin-top: 10px; min-height: 60px;">Replacement of obsolete digital signal processor for SM-2 Block IIIB. FY 04: Requirements definition and preliminary design.<br/>FY 05: Round level integration, Critical Design Review.</div> |   |  |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost |  |  | 5.796 | 8.446 | RDT&E Articles Quantity |  |  |  |  |
|   | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  |   |  | 5.796                         | 8.446 |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
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|   | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
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|   | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |  |                               |       |  |       |       |       |       |                                      |  |  |       |       |                         |  |  |  |  |

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~~Exhibit R-2a, RD TEN Project Justification~~

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DATE: **February 2003**

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**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 8 of 28)

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**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 9 of 28)

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|--|------------------------|--------------------------------|---|------------|------------------|--|------------------|------------|------------------|----------------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2)                     |                        |                                |   |            |                  |  |                  |            |                  | DATE: <b>February 2003</b> |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDTE, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>0604366N/STANDARD MISSILE IMPROVEMENTS |            |                  | PROJECT NUMBER AND NAME<br>K0439 Standard Missile Improvements |                  |            |                  |                            |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 03 Cost | FY 03 Award Date | FY 04 Cost   | FY 04 Award Date | FY 05 Cost | FY 05 Award Date | Cost to Complete           | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation                        | WR                     | NSWC Port Hueneme              | 0.000   | 0.145      | 10/02            | 0.550  | 11/03            | 0.800      | 11/04            |                            | Continuing | Continuing               |
|  | WR                     | WSMR                           | 0.000   |            |                  | 2.700  | 11/03            | 1.600      | 11/04            |                            | Continuing | Continuing               |
| Operational Test & Evaluation                          |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Live Fire Test & Evaluation                            |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Test Assets  |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Tooling  |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| GFE  |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Award Fees   |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Subtotal T&E   |                        |                                | 0.000   | 0.145      |                  | 3.250  |                  | 2.400      |                  | 0.000                      | Continuing |                          |
| Remarks:   |                        |                                |   |            |                  |  |                  |            |                  |                            |            |                          |
| Contractor Engineering Support                         | C/CPAF                 | various                        | 0.000   | 0.741      | 10/02            | 0.350  | 11/03            | 0.357      | 11/04            |                            | Continuing | Continuing               |
| Government Engineering Support                         |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Program Management Support                             |                        | various                        | 0.000   | 0.755      | 10/02            | 0.350  | 11/03            | 0.350      | 11/04            |                            | Continuing | Continuing               |
| Travel   |                        |                                |   | 0.028      |                  | 0.050  |                  | 0.150      | 11/04            |                            | Continuing | Continuing               |
| Transportation   |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| SBIR Assessment  |                        |                                |   |            |                  |  |                  |            |                  |                            | 0.000      |                          |
| Subtotal Management                                    |                        |                                | 0.000   | 1.524      |                  | 0.750  |                  | 0.857      |                  | 0.000                      | Continuing |                          |
| Remarks:   |                        |                                |   |            |                  |  |                  |            |                  |                            |            |                          |
| Total Cost   |                        |                                | 794.279   | 15.929     |                  | 42.717   |                  | 50.683     |                  | 0.000                      | Continuing |                          |
| Remarks:   |                        |                                |   |            |                  |  |                  |            |                  |                            |            |                          |

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 10 of 28)

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| EXHIBIT R4, Schedule Profile                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   | DATE: February 2003 |      |   |   |   |      |  |  |  |  |
|--|------|---|---|---|------|---|---|---|------|--|---|---|------|---|---|---|------|---|---|-------------------------------------|------|---|---|---------------------|------|---|---|---|------|--|--|--|--|
| NOT APPLICABLE                               |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                |      |   |   |   |      |   |   |   |      | PROGRAM ELEMENT NUMBER AND NAME        |   |   |      |   |   |   |      |   |   | PROJECT NUMBER AND NAME             |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| RDT&E, N / BA-5                              |      |   |   |   |      |   |   |   |      | 0604366N/STANDARD MISSILE IMPROVEMENTS |   |   |      |   |   |   |      |   |   | K0439 Standard Missile Improvements |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Fiscal Year                                  | 2002 |   |   |   | 2003 |   |   |   | 2004 |  |   |   | 2005 |   |   |   | 2006 |   |   |                                     | 2007 |   |   |                     | 2008 |   |   |   | 2009 |  |  |  |  |
|  | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2                                      | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4                                   | 1    | 2 | 3 | 4                   | 1    | 2 | 3 | 4 |      |  |  |  |  |
| Acquisition Milestones                       |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Prototype Phase                              |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Radar System Development                     |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| EDM Radar Delivery                           |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Software<br>1XXSW Delivery<br>2XXSW Delivery |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Test & Evaluation Milestones                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Development Test                             |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Operational Test                             |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Production Milestones                        |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| LRIP I FY 05                                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| LRIP II FY 06                                |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| FRP FY 07                                    |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |
| Deliveries                                   |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                                     |      |   |   |                     |      |   |   |   |      |  |  |  |  |

R-1 SHOPPING LIST - Item No. 110

\* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 11 of 28)

# UNCLASSIFIED

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| Exhibit R-4a, Schedule Detail<br><b>NOT APPLICABLE</b> |         |   |         |         |         | DATE: <b>February 2003</b>                                     |         |         |
|--|---------|---|---------|---------|---------|--|---------|---------|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;BA-5</b>   |         | PROGRAM ELEMENT<br>0604366N/STANDARD MISSILE IMPROVEMENTS |         |         |         | PROJECT NUMBER AND NAME<br>K0439 Standard Missile Improvements |         |         |
| Schedule Profile                                       | FY 2002 | FY 2003   | FY 2004 | FY 2005 | FY 2006 | FY 2007  | FY 2008 | FY 2009 |
| Prototype Phase  |         |   |         |         |         |  |         |         |
| System Design Review (SDR)                             |         |   |         |         |         |  |         |         |
| Milestone II (MSII)                                    |         |   |         |         |         |  |         |         |
| Contract Preparation                                   |         |   |         |         |         |  |         |         |
| Software Specification Review (SSR)                    |         |   |         |         |         |  |         |         |
| Preliminary Design Review (PDR)                        |         |   |         |         |         |  |         |         |
| System Development                                     |         |   |         |         |         |  |         |         |
| Critical Design Review (CDR)                           |         |   |         |         |         |  |         |         |
| Quality Design and Build                               |         |   |         |         |         |  |         |         |
| Test Readiness Review (TRR)                            |         |   |         |         |         |  |         |         |
| Developmental Testing (DT-IIA)                         |         |   |         |         |         |  |         |         |
| Eng Dev Model (EDM) Radar Delivery - Lab               |         |   |         |         |         |  |         |         |
| Software Delivery 1XXSW                                |         |   |         |         |         |  |         |         |
| Preproduction Readiness Review (PRR)                   |         |   |         |         |         |  |         |         |
| EDM Radar Delivery - Flt Related                       |         |   |         |         |         |  |         |         |
| Milestone C (MS C)                                     |         |   |         |         |         |  |         |         |
| Operational Testing (OT-IIA)                           |         |   |         |         |         |  |         |         |
| Start Low-Rate Initial Production I (LRIP I)           |         |   |         |         |         |  |         |         |
| Software Delivery 2XXSW                                |         |   |         |         |         |  |         |         |
| Developmental Testing (DT-IIB1)                        |         |   |         |         |         |  |         |         |
| Developmental Testing (DT-IIB2)                        |         |   |         |         |         |  |         |         |
| Start Low-Rate Initial Production II                   |         |   |         |         |         |  |         |         |
| Operational Testing (OT-IIB)                           |         |   |         |         |         |  |         |         |
| Developmental Testing (DT-IIC)                         |         |   |         |         |         |  |         |         |
| Functional Configuration Audit (FCA)                   |         |   |         |         |         |  |         |         |
| Low-Rate Initial Production I Delivery                 |         |   |         |         |         |  |         |         |
| Technical Evaluation (TECHEVAL)                        |         |   |         |         |         |  |         |         |
| Physical Configuration Audit                           |         |   |         |         |         |  |         |         |
| Operational Evaluation (OT-IIC) (OPEVAL)               |         |   |         |         |         |  |         |         |
| Low-Rate Initial Production II Delivery                |         |   |         |         |         |  |         |         |
| IOC  |         |   |         |         |         |  |         |         |
| Full Rate Production (FRP) Decision                    |         |   |         |         |         |  |         |         |
| Full Rate Production Start                             |         |   |         |         |         |  |         |         |
| First Deployment                                       |         |   |         |         |         |  |         |         |
|  |         |   |         |         |         |  |         |         |

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 12 of 28)

# UNCLASSIFIED

## CLASSIFICATION:

|   |         |   |         |         |  |         |                               |         |
|---|---------|---|---------|---------|--|---------|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |  |         | DATE:<br><b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS |         |         | PROJECT NUMBER AND NAME<br>K2639/Standard Missile Improvements |         |                               |         |
| COST (\$ in Millions)                                       | FY 2002 | FY 2003   | FY 2004 | FY 2005 | FY 2006  | FY 2007 | FY 2008                       | FY 2009 |
| Project Cost  | 12.350  |   |         |         |  |         |                               |         |
| RDT&E Articles Qty  |         |   |         |         |  |         |                               |         |

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

Minor software modifications are necessary to improve SM-2 Block IIIB's agility and restore performance in the near term against a specific recently proliferated anti-ship cruise missile threat. Optical correlator is an effort to apply artificial intelligence developments to automatic signal recognition. Continuous analysis of missile capabilities vs. ever-evolving and proliferating aircraft and ASCMs and long-range planning are required to keep pace with the threat.

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| EXHIBIT R-2a, RDT&E Project Justification  |   |  | DATE:<br><b>February 2003</b> |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
|--|---|--|-------------------------------|-------|--|-------|-------|-------|-------|--------------------------------------|-------|--|--|--|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K2639/Standard Missile Improvements |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| <b>B. Accomplishments/Planned Program</b>  |   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">9.060</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div> |   |  |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 9.060 |  |  |  | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 9.060   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.950</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div> |   |  |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 1.950 |  |  |  | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 1.950   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| <div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div>  |   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.340</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; height: 60px; margin-top: 5px;"></div> |   |  |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 1.340 |  |  |  | RDT&E Articles Quantity |  |  |  |  |
|  | FY 02   | FY 03  | FY 04                         | FY 05 |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost   | 1.340   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |
| RDT&E Articles Quantity  |   |  |                               |       |  |       |       |       |       |                                      |       |  |  |  |                         |  |  |  |  |

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|---|---|--|----------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |   |  | DATE: <b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K2639/Standard Missile Improvements |                            |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                           |   |  |                            |         |
| Funding:  | FY 2002   | FY 2003  | FY 2004                    | FY 2005 |
| Previous President's Budget: (FY 03 Pres Controls)          | 12.687  |  |                            |         |
| Current BES/President's Budget: (FY04/05 Pres Bud Controls) | 12.350  |  |                            |         |
| Total Adjustments   | -0.337  | 0.000  | 0.000                      | 0.000   |
| Summary of Adjustments                                      |   |  |                            |         |
| SBIR  | -0.276  |  |                            |         |
| Economic Assumptions  | -0.061  |  |                            |         |
| Subtotal  | -0.337  | 0.000  | 0.000                      | 0.000   |
| Schedule:   |   |  |                            |         |
| Not applicable  |   |  |                            |         |
| Technical:  |   |  |                            |         |
| Not Applicable.   |   |  |                            |         |

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**Exhibit R-2a, RD TEN Project Justification**  
(Exhibit R-2a, page 16 of 28)

R-1 SHOPPING LIST - Item No. 110



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| Exhibit R-3 Cost Analysis (page 1) |                        |                                |  |            |                  |                                     |                  | DATE: <b>February 2003</b> |                  |                  |            |                          |
|------------------------------------|------------------------|--------------------------------|--|------------|------------------|-------------------------------------|------------------|----------------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                        |            |                  | PROJECT NUMBER AND NAME             |                  |                            |                  |                  |            |                          |
| <b>RDT&amp;E, N / BA-5</b>         |                        |                                | 0604366N/STANDARD MISSILE IMPROVEMENTS |            |                  | K2639/Standard Missile Improvements |                  |                            |                  |                  |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                        | FY 03 Cost | FY 03 Award Date | FY 04 Cost                          | FY 04 Award Date | FY 05 Cost                 | FY 05 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development       |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Ancillary Hardware Development     |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Component Development              |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Design and Analysis                | PR                     | JHU/APL                        | 2.417                                  |            |                  |                                     |                  |                            |                  |                  | 2.417      |                          |
|                                    | WR                     | NSWC/Dahlgren                  | 1.800                                  |            |                  |                                     |                  |                            |                  |                  | 1.800      |                          |
|                                    | SS/CPAF                | Raytheon                       | 1.770                                  |            |                  |                                     |                  |                            |                  |                  | 1.770      |                          |
|                                    | PR                     | MIT/LL                         | 0.240                                  |            |                  |                                     |                  |                            |                  |                  | 0.240      |                          |
|                                    | WR                     | NSWC/PHD                       | 0.150                                  |            |                  |                                     |                  |                            |                  |                  | 0.150      |                          |
|                                    | WR                     | NAWC WD CL                     | 0.200                                  |            |                  |                                     |                  |                            |                  |                  | 0.200      |                          |
|                                    |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Ship Integration                   |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Ship Suitability                   |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Systems Engineering                |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Training Development               |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Licenses                           |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Tooling                            |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| GFE                                |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Award Fees                         |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Subtotal Product Development       |                        |                                | 6.577                                  | 0.000      |                  | 0.000                               |                  | 0.000                      |                  | 0.000            | 6.577      |                          |
| Remarks:                           |                        |                                |  |            |                  |                                     |                  |                            |                  |                  |            |                          |
| Development Support                |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Software Development               | SS/CPAF                | Raytheon                       | 5.357                                  |            |                  |                                     |                  |                            |                  |                  | 5.357      |                          |
| Training Development               |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Integrated Logistics Support       |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Configuration Management           |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Technical Data                     |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| GFE                                |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Award Fees                         |                        |                                |  |            |                  |                                     |                  |                            |                  |                  | 0.000      |                          |
| Subtotal Support                   |                        |                                | 5.357                                  | 0.000      |                  | 0.000                               |                  | 0.000                      |                  | 0.000            | 5.357      |                          |
| Remarks:                           |                        |                                |  |            |                  |                                     |                  |                            |                  |                  |            |                          |

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|  |                        |                                |   |            |                  |            |  |            |                  |                            |            |                          |  |
|--|------------------------|--------------------------------|---|------------|------------------|------------|--|------------|------------------|----------------------------|------------|--------------------------|--|
| Exhibit R-3 Cost Analysis (page 2)                         |                        |                                |   |            |                  |            |  |            |                  | DATE: <b>February 2003</b> |            |                          |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RD&amp;E, N / BA-5</b> |                        |                                | PROGRAM ELEMENT<br>0604366N/STANDARD MISSILE IMPROVEMENTS |            |                  |            | PROJECT NUMBER AND NAME<br>K2639/Standard Missile Improvements |            |                  |                            |            |                          |  |
| Cost Categories  | Contract Method & Type | Performing Activity & Location | Total PY s Cost   | FY 03 Cost | FY 03 Award Date | FY 04 Cost | FY 04 Award Date   | FY 05 Cost | FY 05 Award Date | Cost to Complete           | Total Cost | Target Value of Contract |  |
| Developmental Test & Evaluation                            | WR                     | NSWC PHD                       | 0.346   |            |                  |            |  |            |                  |                            | 0.346      |                          |  |
|  | WR                     | WSMR                           |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Operational Test & Evaluation                              |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Live Fire Test & Evaluation                                |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Test Assets  |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Tooling  |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| GFE  |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Award Fees   |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Subtotal T&E   |                        |                                | 0.346   | 0.000      |                  | 0.000      |  | 0.000      |                  | 0.000                      | 0.346      |                          |  |
| Remarks:   |                        |                                |   |            |                  |            |  |            |                  |                            |            |                          |  |
| Contractor Engineering Support                             | CPAF                   | various                        | 0.050   |            |                  |            |  |            |                  |                            | 0.050      |                          |  |
| Government Engineering Support                             |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Program Management Support                                 |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Travel   |                        |                                | 0.020   |            |                  |            |  |            |                  |                            | 0.020      |                          |  |
| Labor (Research Personnel)                                 |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| SBIR Assessment  |                        |                                |   |            |                  |            |  |            |                  |                            | 0.000      |                          |  |
| Subtotal Management  |                        |                                | 0.070   | 0.000      |                  | 0.000      |  | 0.000      |                  | 0.000                      | 0.070      |                          |  |
| Remarks:   |                        |                                |   |            |                  |            |  |            |                  |                            |            |                          |  |
| Total Cost   |                        |                                | 12.350  | 0.000      |                  | 0.000      |  | 0.000      |                  | 0.000                      | 12.350     |                          |  |
| Remarks:   |                        |                                |   |            |                  |            |  |            |                  |                            |            |                          |  |

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 18 of 28)

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|   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|--|------|---|---|----------------------------|------|---|---|---|------|---|---|---|
| EXHIBIT R4, Schedule Profile                                |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   | DATE: <b>February 2003</b> |      |   |   |   |      |   |   |   |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |      |   |   |   |      |   |   |   |      | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS |   |   |      |   |   |   |      |   |   | PROJECT NUMBER AND NAME<br>K2639/Standard Missile Improvements |      |   |   |                            |      |   |   |   |      |   |   |   |
| Fiscal Year   | 2002 |   |   |   | 2003 |   |   |   | 2004 |   |   |   | 2005 |   |   |   | 2006 |   |   |  | 2007 |   |   |                            | 2008 |   |   |   | 2009 |   |   |   |
|   | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2   | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4  | 1    | 2 | 3 | 4                          | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 |
| <b>Acquisition Milestones</b>                               |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Prototype Phase   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Radar System Development                                    |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| EDM Radar Delivery  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Software<br>1XXSW Delivery<br>2XXSW Delivery                |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| <b>Test &amp; Evaluation Milestones</b>                     |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Development Test  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Operational Test  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| <b>Production Milestones</b>                                |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| LRIP I FY 05  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| LRIP II FY 06   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| FRP FY 07   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |
| Deliveries  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |                            |      |   |   |   |      |   |   |   |

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\* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 19 of 28)

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CLASSIFICATION: Unclassified

|  |         |  |         |         |         |                                     |         |         |
|--|---------|--|---------|---------|---------|-------------------------------------|---------|---------|
| Exhibit R-4a, Schedule Detail                |         |  |         |         |         | DATE:                               |         |         |
| Not applicable                               |         |  |         |         |         | February 2003                       |         |         |
| APPROPRIATION/BUDGET ACTIVITY                |         | PROGRAM ELEMENT                        |         |         |         | PROJECT NUMBER AND NAME             |         |         |
| RDT&BA-5                                     |         | 0604366N/STANDARD MISSILE IMPROVEMENTS |         |         |         | K2639/Standard Missile Improvements |         |         |
| Schedule Profile                             | FY 2002 | FY 2003                                | FY 2004 | FY 2005 | FY 2006 | FY 2007                             | FY 2008 | FY 2009 |
| Prototype Phase                              |         |  |         |         |         |                                     |         |         |
| System Design Review (SDR)                   |         |  |         |         |         |                                     |         |         |
| Milestone II (MSII)                          |         |  |         |         |         |                                     |         |         |
| Contract Preparation                         |         |  |         |         |         |                                     |         |         |
| Software Specification Review (SSR)          |         |  |         |         |         |                                     |         |         |
| Preliminary Design Review (PDR)              |         |  |         |         |         |                                     |         |         |
| System Development                           |         |  |         |         |         |                                     |         |         |
| Critical Design Review (CDR)                 |         |  |         |         |         |                                     |         |         |
| Quality Design and Build                     |         |  |         |         |         |                                     |         |         |
| Test Readiness Review (TRR)                  |         |  |         |         |         |                                     |         |         |
| Developmental Testing (DT-IIA)               |         |  |         |         |         |                                     |         |         |
| Eng Dev Model (EDM) Radar Delivery - Lab     |         |  |         |         |         |                                     |         |         |
| Software Delivery 1XXSW                      |         |  |         |         |         |                                     |         |         |
| Preproduction Readiness Review (PRR)         |         |  |         |         |         |                                     |         |         |
| EDM Radar Delivery - Flt Related             |         |  |         |         |         |                                     |         |         |
| Milestone C (MS C)                           |         |  |         |         |         |                                     |         |         |
| Operational Testing (OT-IIA)                 |         |  |         |         |         |                                     |         |         |
| Start Low-Rate Initial Production I (LRIP I) |         |  |         |         |         |                                     |         |         |
| Software Delivery 2XXSW                      |         |  |         |         |         |                                     |         |         |
| Developmental Testing (DT-IIB1)              |         |  |         |         |         |                                     |         |         |
| Developmental Testing (DT-IIB2)              |         |  |         |         |         |                                     |         |         |
| Start Low-Rate Initial Production II         |         |  |         |         |         |                                     |         |         |
| Operational Testing (OT-IIB)                 |         |  |         |         |         |                                     |         |         |
| Developmental Testing (DT-IIC)               |         |  |         |         |         |                                     |         |         |
| Functional Configuration Audit (FCA)         |         |  |         |         |         |                                     |         |         |
| Low-Rate Initial Production I Delivery       |         |  |         |         |         |                                     |         |         |
| Technical Evaluation (TECHEVAL)              |         |  |         |         |         |                                     |         |         |
| Physical Configuration Audit                 |         |  |         |         |         |                                     |         |         |
| Operational Evaluation (OT-IIC) (OPEVAL)     |         |  |         |         |         |                                     |         |         |
| Low-Rate Initail Production II Delivery      |         |  |         |         |         |                                     |         |         |
| IOC  |         |  |         |         |         |                                     |         |         |
| Full Rate Production (FRP) Decision          |         |  |         |         |         |                                     |         |         |
| Full Rate Production Start                   |         |  |         |         |         |                                     |         |         |
| First Deployment                             |         |  |         |         |         |                                     |         |         |
|  |         |  |         |         |         |                                     |         |         |

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 20 of 28)

# UNCLASSIFIED

## CLASSIFICATION:

|   |         |   |         |         |                                       |         |                               |         |
|---|---------|---|---------|---------|---------------------------------------|---------|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |         |   |         |         |                                       |         | DATE:<br><b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS |         |         | PROJECT NUMBER AND NAME<br>K3092/SM-5 |         |                               |         |
| COST (\$ in Millions)                                       | FY 2002 | FY 2003   | FY 2004 | FY 2005 | FY 2006                               | FY 2007 | FY 2008                       | FY 2009 |
| Project Cost  | 0.000   | 4.890   | 34.210  | 50.000  | 166.193                               | 190.930 | 212.655                       | 206.284 |
| RDT&E Articles Qty  |         |   |         |         |                                       |         |                               |         |

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

This project addresses the Navy's need for extended range shipboard air defense missiles. It leverages existing missile technology as well as classified, advanced technology, and it takes advantage of the Navy's investment in the Aegis Weapon System, CEC, and airborne early warning systems. This missile will provide an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of projected future cruise missile (anti-ship and land attack) and manned aircraft threats discussed in the Joint TAMD MNS, DPG, QDR, and TAMD Capstone Requirements Document.

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| EXHIBIT R-2a, RDT&E Project Justification   |   |                                       | DATE:<br><b>February 2003</b> |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
|---|---|---------------------------------------|-------------------------------|--------|--|-------|-------|-------|-------|--------------------------------------|-------|-------|--------|--------|-------------------------|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>   | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K3092/SM-5 |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| <b>B. Accomplishments/Planned Program</b>   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td style="text-align: center;">6.400</td><td style="text-align: center;">10.100</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>  |   |                                       |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost |       |       | 6.400  | 10.100 | RDT&E Articles Quantity |  |  |  |  |
|   | FY 02   | FY 03                                 | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  |   |                                       | 6.400                         | 10.100 |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| Aegis Weapon System and MK 41 Vertical Launch System integration.   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">4.890</td><td style="text-align: center;">27.810</td><td style="text-align: center;">39.900</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> |   |                                       |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 0.000 | 4.890 | 27.810 | 39.900 | RDT&E Articles Quantity |  |  |  |  |
|   | FY 02   | FY 03                                 | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  | 0.000   | 4.890                                 | 27.810                        | 39.900 |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| Missile development. FY 03: Planning, requirements definition, trade studies.<br>FY 04: Continue program definition, risk reduction, preliminary design.<br>FY 05: Preliminary Design Review.   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>   |   |                                       |                               |        |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost |       |       |        |        | RDT&E Articles Quantity |  |  |  |  |
|   | FY 02   | FY 03                                 | FY 04                         | FY 05  |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| Accomplishments/Effort/Subtotal Cost  |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
| RDT&E Articles Quantity   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |
|   |   |                                       |                               |        |  |       |       |       |       |                                      |       |       |        |        |                         |  |  |  |  |

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|   |   |                                       |                            |         |
|---|---|---------------------------------------|----------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |   |                                       | DATE: <b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>0604366N/STANDARD MISSILE IMPROVEMENTS | PROJECT NUMBER AND NAME<br>K3092/SM-5 |                            |         |
| <b>C. PROGRAM CHANGE SUMMARY:</b>                           |   |                                       |                            |         |
| Funding:  | FY 2002   | FY 2003                               | FY 2004                    | FY 2005 |
| Previous President's Budget: (FY 03 Pres Controls)          |   |                                       |                            |         |
| Current BES/President's Budget: (FY04/05 Pres Controls)     | 0.000   | 4.890                                 | 34.210                     | 50.000  |
| Total Adjustments   | 0.000   | 4.890                                 | 34.210                     | 50.000  |
| Summary of Adjustments                                      |   |                                       |                            |         |
| Minor Programmatic Adjustments                              |   | -0.110                                | -0.790                     |         |
| Reprogrammings  |   |                                       | 35.000                     | 50.000  |
| Congressional increases                                     |   | 5.000                                 |                            |         |
| Subtotal  | 0.000   | 4.890                                 | 34.210                     | 50.000  |
| Schedule:   |   |                                       |                            |         |
| TBD.  |   |                                       |                            |         |
| Technical:  |   |                                       |                            |         |
| TBD.  |   |                                       |                            |         |

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**Exhibit R-2a, RD TEN Project Justification**  
(Exhibit R-2a, page 24 of 28)

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| Exhibit R-3 Cost Analysis (page 1) |                        |                                |  |            |                  |                         |                  | DATE: February 2003 |                  |                  |            |                          |
|------------------------------------|------------------------|--------------------------------|--|------------|------------------|-------------------------|------------------|---------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                        |            |                  | PROJECT NUMBER AND NAME |                  |                     |                  |                  |            |                          |
| RDT&E, N / BA-5                    |                        |                                | 0604366N/STANDARD MISSILE IMPROVEMENTS |            |                  | K3092/SM-5              |                  |                     |                  |                  |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                        | FY 03 Cost | FY 03 Award Date | FY 04 Cost              | FY 04 Award Date | FY 05 Cost          | FY 05 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development       |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Ancillary Hardware Development     |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Component Development              |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Design and Analysis                | PR                     | JHU/APL, Laurel MD             | 0.000                                  | 0.200      | 10/02            | 1.750                   | 11/03            | 2.000               | 11/04            | Continuing       | Continuing |                          |
|                                    | PR                     | MIT Lincoln Lab, Lexington, MA | 0.000                                  |            |                  | 0.100                   | 11/03            | 0.100               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NAWC WD China Lake, CA         | 0.000                                  | 0.200      | 10/02            | 0.700                   | 11/03            | 0.700               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NSWC Dahlgren, VA              | 0.000                                  | 0.050      | 10/02            | 0.100                   | 11/03            | 0.100               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NSWC Indian Head, MD           | 0.000                                  |            |                  | 0.070                   | 11/03            | 0.052               | 11/04            | Continuing       | Continuing |                          |
|                                    | TBD                    | Contractor TBD                 | 0.000                                  | 3.750      | 03/03            | 19.700                  | 11/03            | 29.300              | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NSWC Port Hueneme, CA          | 0.000                                  |            |                  | 0.150                   | 11/03            | 0.150               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NWS Earle, NJ                  | 0.000                                  |            |                  | 0.050                   | 11/03            | 0.052               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NSWC Crane, IN                 | 0.000                                  |            |                  | 0.050                   | 11/03            | 0.051               | 11/04            | Continuing       | Continuing |                          |
|                                    |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Ship Integration                   | WR                     | PMS400                         | 0.000                                  |            |                  | 4.900                   | 11/03            | 7.100               | 11/04            | Continuing       | Continuing |                          |
|                                    | WR                     | NSWC Dahlgren                  | 0.000                                  |            |                  | 1.500                   | 11/03            | 3.000               | 11/04            | Continuing       | Continuing |                          |
| Ship Suitability                   |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Systems Engineering                |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Training Development               |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Licenses                           |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Tooling                            |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| GFE                                |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Award Fees                         |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Subtotal Product Development       |                        |                                | 0.000                                  | 4.200      |                  | 29.070                  |                  | 42.605              |                  | Continuing       | Continuing |                          |
| Remarks:                           |                        |                                |  |            |                  |                         |                  |                     |                  |                  |            |                          |
| Development Support                | WR                     | various                        | 0.000                                  | 0.590      | 10/02            | 4.180                   | 11/03            | 6.050               | 11/04            | Continuing       | Continuing |                          |
| Software Development               |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Training Development               |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Integrated Logistics Support       |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Configuration Management           |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Technical Data                     |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| GFE                                |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Award Fees                         |                        |                                |  |            |                  |                         |                  |                     |                  |                  | 0.000      |                          |
| Subtotal Support                   |                        |                                | 0.000                                  | 0.590      |                  | 4.180                   |                  | 6.050               |                  | Continuing       | Continuing |                          |

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Exhibit R-3, Project Cost Analysis

(Exhibit R-3, page 25 of 28)

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CLASSIFICATION: Unclassified

| Exhibit R-3 Cost Analysis (page 2) |                        |                                |  |            |                  |                         |                  |            |                  | DATE: February 2003 |            |                          |
|------------------------------------|------------------------|--------------------------------|--|------------|------------------|-------------------------|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                        |            |                  | PROJECT NUMBER AND NAME |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5                    |                        |                                | 0604366N/STANDARD MISSILE IMPROVEMENTS |            |                  | K3092/SM-5              |                  |            |                  |                     |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                        | FY 03 Cost | FY 03 Award Date | FY 04 Cost              | FY 04 Award Date | FY 05 Cost | FY 05 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation    | WR                     | NSWC Port Hueneme, CA          | 0.000                                  |            |                  | 0.200                   | 11/03            | 0.225      | 11/04            | Continuing          | Continuing |                          |
|                                    | WR                     | White Sands Missile Range,     | 0.000                                  |            |                  | 0.150                   | 11/03            | 0.500      | 11/04            | Continuing          | Continuing |                          |
|                                    |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Operational Test & Evaluation      |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Live Fire Test & Evaluation        |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Test Assets                        |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Tooling                            |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| GFE                                |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Award Fees                         |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Subtotal T&E                       |                        |                                | 0.000                                  | 0.000      |                  | 0.350                   |                  | 0.725      |                  | Continuing          | Continuing |                          |
| Remarks:                           |                        |                                |  |            |                  |                         |                  |            |                  |                     |            |                          |
| Contractor Engineering Support     | CPAF                   | various                        | 0.000                                  | 0.100      | 03/03            | 0.600                   | 11/03            | 0.600      | 11/04            | Continuing          | Continuing |                          |
| Government Engineering Support     |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Program Management Support         |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Travel                             |                        |                                |  |            |                  | 0.010                   |                  | 0.020      |                  | Continuing          | Continuing |                          |
| Labor (Research Personnel)         |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| SBIR Assessment                    |                        |                                |  |            |                  |                         |                  |            |                  |                     | 0.000      |                          |
| Subtotal Management                |                        |                                | 0.000                                  | 0.100      |                  | 0.610                   |                  | 0.620      |                  | Continuing          | Continuing |                          |
| Remarks:                           |                        |                                |  |            |                  |                         |                  |            |                  |                     |            |                          |
| Total Cost                         |                        |                                | 0.000                                  | 4.890      |                  | 34.210                  |                  | 50.000     |                  | Continuing          | Continuing |                          |
| Remarks:                           |                        |                                |  |            |                  |                         |                  |            |                  |                     |            |                          |

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 26 of 28)

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| EXHIBIT R4, Schedule Profile                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   | DATE:         |      |   |   |   |      |  |  |  |
|--|------|---|---|---|------|---|---|---|------|--|---|---|------|---|---|---|------|---|---|-------------------------|------|---|---|---------------|------|---|---|---|------|--|--|--|
| TBD  |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   | February 2003 |      |   |   |   |      |  |  |  |
| APPROPRIATION/BUDGET ACTIVITY                |      |   |   |   |      |   |   |   |      | PROGRAM ELEMENT NUMBER AND NAME        |   |   |      |   |   |   |      |   |   | PROJECT NUMBER AND NAME |      |   |   |               |      |   |   |   |      |  |  |  |
| RDT&E, N / BA-5                              |      |   |   |   |      |   |   |   |      | 0604366N/STANDARD MISSILE IMPROVEMENTS |   |   |      |   |   |   |      |   |   | K3092/SM-5              |      |   |   |               |      |   |   |   |      |  |  |  |
| Fiscal Year                                  | 2002 |   |   |   | 2003 |   |   |   | 2004 |  |   |   | 2005 |   |   |   | 2006 |   |   |                         | 2007 |   |   |               | 2008 |   |   |   | 2009 |  |  |  |
|  | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2                                      | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4                       | 1    | 2 | 3 | 4             | 1    | 2 | 3 | 4 |      |  |  |  |
| Acquisition Milestones                       |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Prototype Phase                              |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Radar System Development                     |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| EDM Radar Delivery                           |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Software<br>1XXSW Delivery<br>2XXSW Delivery |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Test & Evaluation Milestones                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Development Test                             |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Operational Test                             |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Production Milestones                        |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| LRIP I FY 05                                 |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| LRIP II FY 06                                |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| FRP FY 07                                    |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |
| Deliveries                                   |      |   |   |   |      |   |   |   |      |  |   |   |      |   |   |   |      |   |   |                         |      |   |   |               |      |   |   |   |      |  |  |  |

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\* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile  
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| Exhibit R-4a, Schedule Detail                |         |  |         |         |         | DATE:                   |         |         |
|--|---------|--|---------|---------|---------|-------------------------|---------|---------|
| TBD  |         |  |         |         |         | February 2003           |         |         |
| APPROPRIATION/BUDGET ACTIVITY                |         | PROGRAM ELEMENT                        |         |         |         | PROJECT NUMBER AND NAME |         |         |
| RDT&BA-5                                     |         | 0604366N/STANDARD MISSILE IMPROVEMENTS |         |         |         | K3092/SM-5              |         |         |
| Schedule Profile                             | FY 2002 | FY 2003                                | FY 2004 | FY 2005 | FY 2006 | FY 2007                 | FY 2008 | FY 2009 |
| Prototype Phase                              |         |  |         |         |         |                         |         |         |
| System Design Review (SDR)                   |         |  |         |         |         |                         |         |         |
| Milestone II (MSII)                          |         |  |         |         |         |                         |         |         |
| Contract Preparation                         |         |  |         |         |         |                         |         |         |
| Software Specification Review (SSR)          |         |  |         |         |         |                         |         |         |
| Preliminary Design Review (PDR)              |         |  |         |         |         |                         |         |         |
| System Development                           |         |  |         |         |         |                         |         |         |
| Critical Design Review (CDR)                 |         |  |         |         |         |                         |         |         |
| Quality Design and Build                     |         |  |         |         |         |                         |         |         |
| Test Readiness Review (TRR)                  |         |  |         |         |         |                         |         |         |
| Developmental Testing (DT-IIA)               |         |  |         |         |         |                         |         |         |
| Eng Dev Model (EDM) Radar Delivery - Lab     |         |  |         |         |         |                         |         |         |
| Software Delivery 1XXSW                      |         |  |         |         |         |                         |         |         |
| Preproduction Readiness Review (PRR)         |         |  |         |         |         |                         |         |         |
| EDM Radar Delivery - Flt Related             |         |  |         |         |         |                         |         |         |
| Milestone C (MS C)                           |         |  |         |         |         |                         |         |         |
| Operational Testing (OT-IIA)                 |         |  |         |         |         |                         |         |         |
| Start Low-Rate Initial Production I (LRIP I) |         |  |         |         |         |                         |         |         |
| Software Delivery 2XXSW                      |         |  |         |         |         |                         |         |         |
| Developmental Testing (DT-IIB1)              |         |  |         |         |         |                         |         |         |
| Developmental Testing (DT-IIB2)              |         |  |         |         |         |                         |         |         |
| Start Low-Rate Initial Production II         |         |  |         |         |         |                         |         |         |
| Operational Testing (OT-IIB)                 |         |  |         |         |         |                         |         |         |
| Developmental Testing (DT-IIC)               |         |  |         |         |         |                         |         |         |
| Functional Configuration Audit (FCA)         |         |  |         |         |         |                         |         |         |
| Low-Rate Initial Production I Delivery       |         |  |         |         |         |                         |         |         |
| Technical Evaluation (TECHEVAL)              |         |  |         |         |         |                         |         |         |
| Physical Configuration Audit                 |         |  |         |         |         |                         |         |         |
| Operational Evaluation (OT-IIC) (OPEVAL)     |         |  |         |         |         |                         |         |         |
| Low-Rate Initial Production II Delivery      |         |  |         |         |         |                         |         |         |
| IOC  |         |  |         |         |         |                         |         |         |
| Full Rate Production (FRP) Decision          |         |  |         |         |         |                         |         |         |
| Full Rate Production Start                   |         |  |         |         |         |                         |         |         |
| First Deployment                             |         |  |         |         |         |                         |         |         |

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