

# UNCLASSIFIED

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy                                                                    |             |         |         |              |                                                             |               |         |         |         | Date: February 2015 |                  |            |  |
| Appropriation/Budget Activity<br>1319: Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |               |         |         |         |                     |                  |            |  |
| COST (\$ in Millions)                                                                                                         | Prior Years | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO                                                 | FY 2016 Total | FY 2017 | FY 2018 | FY 2019 | FY 2020             | Cost To Complete | Total Cost |  |
| Total Program Element                                                                                                         | 310.329     | 41.713  | 43.294  | 52.770       | -                                                           | 52.770        | 33.024  | 6.161   | 6.271   | 6.440               | Continuing       | Continuing |  |
| 2768: MQ-8 Fire Scout                                                                                                         | 310.329     | 41.713  | 43.294  | 52.770       | -                                                           | 52.770        | 33.024  | 6.161   | 6.271   | 6.440               | Continuing       | Continuing |  |
| Program MDAP/MAIS Code: 253                                                                                                   |             |         |         |              |                                                             |               |         |         |         |                     |                  |            |  |

## **A. Mission Description and Budget Item Justification**

MQ-8 Unmanned Air System Joint Military Intelligence Program.

The MQ-8 Unmanned Air System (popular name "Fire Scout") program went through a Title 10 Section 2433 (Nunn-McCurdy Breach) review in 2014 due to a unit cost breach. The Department certified a restructured program to Congress on 16 June 2014. The restructured program that was certified includes MQ-8B air vehicles procured under the original program of record, MQ-8C air vehicles procured under the Department of the Navy's Rapid Deployment Capability (RDC) procurement process, and an additional 21 MQ-8C air vehicles to be procured to complete the program Fleet requirements of 70 air vehicles (61 procurement and 9 RDT&E), and associated Mission Control Stations (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. The restructured program also includes the endurance upgrade, radar, and weapons capabilities, such as those developed under the Navy's RDC authorities. All acquisition actions previously planned under the RDCs have transitioned into the restructured program of record.

The MQ-8B based system had an approved Milestone C (MS C) in May 2007. The Nunn-McCurdy certification process revoked the MS C approval. MS C for the restructured MQ-8 program is currently scheduled in the 2QFY16.

The MQ-8 Fire Scout provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle management (including voice communication relay). The MQ-8 Fire Scout launches and recovers vertically, and can operate from any suitably equipped air capable ship, as well as area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software integrated into the Mission Control Station (MCS) (also referred to as Ground Control Station (GCS)) and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 will be provided through standard DoD Command, Control, Communications, Computers and ISR system architectures and protocols.

A deployed MQ-8 System is comprised of: air vehicle(s), payloads (i.e. electro-optical/infra-red/laser designator-range finder, Automated Identification System, communications relay, radar, weapons, and other specialty payloads), MCS (with TCS and TC DL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. A limited number of land-based mission control stations supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities.

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| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Navy | <b>Date:</b> February 2015 |
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| <b>Appropriation/Budget Activity</b><br>1319: Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development | <b>R-1 Program Element (Number/Name)</b><br>PE 0305231N / MQ-8 UAV |
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The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. The MQ-8C is a more cost efficient and capable air vehicle that meets the requirements of the updated Fire Scout Capability Production Document. The Navy plans to procure 40 MQ-8C air vehicles to support the Navy's fleet of small surface combatant suitably equipped air capable ships, including the Littoral Combat Ship (LCS). This budget transitions the MQ-8C Endurance Upgrade, Radar, and Weapons capabilities into the Program of Record.

| <b>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2014</b> | <b>FY 2015</b> | <b>FY 2016 Base</b> | <b>FY 2016 OCO</b> | <b>FY 2016 Total</b> |
|---------------------------------------------------|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 41.713         | 47.294         | 53.199              | -                  | 53.199               |
| Current President's Budget                        | 41.713         | 43.294         | 52.770              | -                  | 52.770               |
| Total Adjustments                                 | -              | -4.000         | -0.429              | -                  | -0.429               |
| • Congressional General Reductions                | -              | -              |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -4.000         |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | -              | -              |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | -              | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -              | -              |                     |                    |                      |
| • Rate/Misc Adjustments                           | -              | -              | -0.429              | -                  | -0.429               |

**Change Summary Explanation**

Technical: FYDP funds support the Navy decision to transition MQ-8C Endurance Upgrade, Radar, and Weapons capabilities into the Program of Record.

Schedule:

Revised milestone terminology: Removed Rapid Deployment Capability (RDC) terminology to align with transition of RDC capabilities to the program of record.

Updated associated T&E events to remove reference to RDC.

Updated Milestone C decision, MQ-8C IOC, T&E events, and other milestones to align to the restructured MQ-8 program.

Updated Radar and Weapons capability contract awards and reviews.

Adjusted production and delivery schedules for current and out-year procurements.

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| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy |             |         |         |              |                                                             |               |         |         |                                                 | Date: February 2015 |                  |            |
|---------------------------------------------------------|-------------|---------|---------|--------------|-------------------------------------------------------------|---------------|---------|---------|-------------------------------------------------|---------------------|------------------|------------|
| Appropriation/Budget Activity<br>1319 / 7               |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |               |         |         | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |                     |                  |            |
| COST (\$ in Millions)                                   | Prior Years | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO                                                 | FY 2016 Total | FY 2017 | FY 2018 | FY 2019                                         | FY 2020             | Cost To Complete | Total Cost |
| 2768: MQ-8 Fire Scout                                   | 310.329     | 41.713  | 43.294  | 52.770       | -                                                           | 52.770        | 33.024  | 6.161   | 6.271                                           | 6.440               | Continuing       | Continuing |
| Quantity of RDT&E Articles                              |             | -       | -       | -            | -                                                           | -             | -       | -       | -                                               | -                   |                  |            |

## A. Mission Description and Budget Item Justification

The MQ-8 Fire Scout program went through a Title 10 Section 2433 (Nunn-McCurdy Breach) review in 2014 due to a unit cost breach. The Department certified a restructured program to Congress on 16 June 2014. The restructured program that was certified includes MQ-8B air vehicles procured under the original program of record, MQ-8C air vehicles procured under the Department of the Navy's Rapid Deployment Capability (RDC) procurement process, and an additional 21 MQ-8C air vehicles to be procured to complete the program Fleet requirements of 70 air vehicles (61 procurement and 9 RDT&E), and associated Mission Control Stations (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. The restructured program also includes the endurance upgrade, radar, and weapons capabilities, such as those developed under the Navy's RDC authorities. All acquisition actions previously planned under the RDCs have transitioned into the restructured program of record.

The MQ-8B based system had an approved Milestone C (MS C) in May 2007. The Nunn-McCurdy certification process revoked the MS C approval. MS C for the restructured MQ-8 program is currently scheduled in the 2QFY16.

The MQ-8 Fire Scout provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle management (including voice communications relay). The MQ-8 launches and recovers vertically, and can operate from any suitably equipped air capable ship, as well as area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software integrated into the Mission Control Station (MCS) (also referred to as Ground Control Station (GCS)) and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 will be provided through standard DoD Command, Control, Communications, Computers and ISR system architectures and protocols.

A deployed MQ-8 system is comprised of: air vehicle(s), payloads (i.e. electro-optical/infra-red/laser designator-range finder, Automated Identification System, communications relay, radar, weapons, and other specialty payloads), MCS (with TCS and TCDL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. A limited number of land-based mission control stations supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land based mission control stations will also support depot-level maintenance/post-maintenance activities.

The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. The MQ-8C is a more cost efficient and capable air vehicle that meets the requirements of the Fire Scout Capability Production Document (CPD). This budget transitions the MQ-8C Endurance Upgrade, Radar, and Weapons capabilities into the Program of Record.

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| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy                                                                                                                                                                                                                                                                                                                              |  |                                                             | Date: February 2015 |                                                 |                |                  |
| Appropriation/Budget Activity<br>1319 / 7                                                                                                                                                                                                                                                                                                                                            |  | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |                     | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |                |                  |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                                                                     |  | FY 2014                                                     | FY 2015             | FY 2016<br>Base                                 | FY 2016<br>OCO | FY 2016<br>Total |
| <b>Title:</b> Hardware and System Development                                                                                                                                                                                                                                                                                                                                        |  | 21.891                                                      | 17.900              | 31.355                                          | -              | 31.355           |
| <b>Articles:</b>                                                                                                                                                                                                                                                                                                                                                                     |  | -                                                           | -                   | -                                               | -              | -                |
| <b>FY 2014 Accomplishments:</b><br>Continued MQ-8C hardware, software modifications, and other payload integration. Continued Littoral Combat Ship (LCS) and other air capable ship class integration. Continued MQ-8B radar development and integration.                                                                                                                            |  |                                                             |                     |                                                 |                |                  |
| <b>FY 2015 Plans:</b><br>Continue MQ-8C Rapid Deployment Capability hardware, software modifications, Coastal Battlefield Reconnaissance and Analysis (COBRA), and other payload integration. Continue MQ-8 integration and testing on LCS. Correct deficiencies from MQ-8C and MQ-8B. Initiate MQ-8C Endurance Upgrade, Radar, and Weapons capabilities into the Program of Record. |  |                                                             |                     |                                                 |                |                  |
| <b>FY 2016 Base Plans:</b><br>Continue MQ-8C hardware, software modifications, COBRA, and other payload integration. Continue MQ-8 integration and testing on LCS. Continue transition of MQ-8C Endurance Upgrade, Radar and Weapons capabilities into the Program of Record.                                                                                                        |  |                                                             |                     |                                                 |                |                  |
| <b>FY 2016 OCO Plans:</b><br>N/A                                                                                                                                                                                                                                                                                                                                                     |  |                                                             |                     |                                                 |                |                  |
| <b>Title:</b> Development/Operational Testing                                                                                                                                                                                                                                                                                                                                        |  | 6.100                                                       | 7.500               | 5.500                                           | -              | 5.500            |
| <b>Articles:</b>                                                                                                                                                                                                                                                                                                                                                                     |  | -                                                           | -                   | -                                               | -              | -                |
| <b>FY 2014 Accomplishments:</b><br>Continued MQ-8C air vehicle and MQ-8B Radar testing. Completed MQ-8B based LCS dynamic interface testing for LCS-3 and LCS-4. Completed MQ-8B weapons Quick Reaction Assessment. Continued LCS and other Class Ship integration and testing.                                                                                                      |  |                                                             |                     |                                                 |                |                  |
| <b>FY 2015 Plans:</b><br>Continue MQ-8C testing and initiate LCS integration. Complete MQ-8B radar testing. Continue other payload integration and testing. Initiate development testing for MQ-8C radar, weapons, and other payload capabilities. Initiate Initial Operational Test and Evaluation (IOT&E) for MQ-8C air vehicle.                                                   |  |                                                             |                     |                                                 |                |                  |
| <b>FY 2016 Base Plans:</b>                                                                                                                                                                                                                                                                                                                                                           |  |                                                             |                     |                                                 |                |                  |

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| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy                                                                                                                                                                                                                                                                                |         |         |                 |                                                             |                  |         |         |                                                 | Date: February 2015 |                     |                  |
| Appropriation/Budget Activity<br>1319 / 7                                                                                                                                                                                                                                                                                              |         |         |                 | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |                  |         |         | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |                     |                     |                  |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)                                                                                                                                                                                                                                                       |         |         |                 |                                                             |                  |         | FY 2014 | FY 2015                                         | FY 2016<br>Base     | FY 2016<br>OCO      | FY 2016<br>Total |
| Complete Dynamic Interface testing of MQ-8C on both classes of LCS. Complete MQ-8C Endurance Upgrade developmental testing. Complete IOT&E testing of MQ-8C on LCS. Continue other payload integration and testing.                                                                                                                    |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| FY 2016 OCO Plans:<br>N/A                                                                                                                                                                                                                                                                                                              |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| Title: Engineering and Technical Services                                                                                                                                                                                                                                                                                              |         |         |                 |                                                             |                  |         | 13.722  | 17.894                                          | 15.915              | -                   | 15.915           |
| Articles:                                                                                                                                                                                                                                                                                                                              |         |         |                 |                                                             |                  |         | -       | -                                               | -                   | -                   | -                |
| FY 2014 Accomplishments:<br>Continued engineering, program technical management, logistics support for the MQ-8 Fire Scout system. Initiated MQ-8 system upgrade with the MQ-8C air vehicle subsystem. Continued payload and system studies and design.                                                                                |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| FY 2015 Plans:<br>Continue engineering, program technical management, logistics support. Continue acquisition planning to transition the MQ-8C, Radar, and Weapons capabilities into the Program of Record. Continue Radar, Weapons, other payloads, Littoral Combat Ship (LCS) capabilities payloads, and system studies and design.  |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| FY 2016 Base Plans:<br>Continue engineering, program technical management, logistics support. Continue acquisition planning and execution to transition the MQ-8C, Radar, and Weapons capabilities into the MQ-8 Program of Record. Continue Radar, Weapons, other payloads, LCS capabilities payloads, and system studies and design. |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| FY 2016 OCO Plans:<br>N/A                                                                                                                                                                                                                                                                                                              |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| Accomplishments/Planned Programs Subtotals                                                                                                                                                                                                                                                                                             |         |         |                 |                                                             |                  |         | 41.713  | 43.294                                          | 52.770              | -                   | 52.770           |
| C. Other Program Funding Summary (\$ in Millions)                                                                                                                                                                                                                                                                                      |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |
| Line Item                                                                                                                                                                                                                                                                                                                              | FY 2014 | FY 2015 | FY 2016<br>Base | FY 2016<br>OCO                                              | FY 2016<br>Total | FY 2017 | FY 2018 | FY 2019                                         | FY 2020             | Cost To<br>Complete | Total Cost       |
| • APN, 044300: MQ-8 UAV                                                                                                                                                                                                                                                                                                                | 74.080  | 109.663 | 120.020         | -                                                           | 120.020          | 98.501  | 88.670  | 97.363                                          | 84.345              | 342.226             | 1,635.416        |
| • APN, 060510: MQ-8 UAV Spares                                                                                                                                                                                                                                                                                                         | 12.261  | 12.573  | -               | -                                                           | -                | -       | -       | -                                               | -                   | -                   | 112.953          |
| • APN, 058800: MQ-8 Series                                                                                                                                                                                                                                                                                                             | -       | 8.741   | 22.464          | -                                                           | 22.464           | 19.956  | 9.583   | 5.477                                           | 5.583               | 24.472              | 96.276           |
| Remarks                                                                                                                                                                                                                                                                                                                                |         |         |                 |                                                             |                  |         |         |                                                 |                     |                     |                  |

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| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                             | Date: February 2015                             |
| Appropriation/Budget Activity<br>1319 / 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |
| <p><b>D. Acquisition Strategy</b></p> <p>The Navy is updating our acquisition strategy to restructure the MQ-8 Fire Scout program and capitalize on prior Rapid Deployment Capability efforts, while leveraging existing program investments. The updated acquisition strategy will maintain commonality of MQ-8B and MQ-8C systems, payloads, avionics, software, and ancillary equipment where possible. It will continue integration and test of MQ-8C, Radar, and Weapons capabilities to support the Capability Production Document. Initial Operational Capability (IOC) of an MQ-8B based system was achieved in 2QFY14 while IOC of an MQ-8C based system is anticipated in 4QFY16. A Milestone C with a production decision will follow completion of Operational Test.</p> <p><b>E. Performance Metrics</b></p> <p>Successfully provide an MQ-8C air vehicle that supports operational deployments. Successfully provide a Radar capability for operational deployments. Successfully achieve LCS Ship Integration.</p> |                                                             |                                                 |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy                                                      |                        |                                       |             |         |            |                                                             |            |                 |            |                                                 |            | Date: February 2015 |                  |            |                          |
| Appropriation/Budget Activity<br>1319 / 7                                                                   |                        |                                       |             |         |            | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |            |                 |            | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |            |                     |                  |            |                          |
| Product Development (\$ in Millions)                                                                        |                        |                                       |             | FY 2014 |            | FY 2015                                                     |            | FY 2016<br>Base |            | FY 2016<br>OCO                                  |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                                                                          | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost                                                        | Award Date | Cost            | Award Date | Cost                                            | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development (MQ-8)                                                                         | C/CPIF                 | Northrop Grumman Corp : San Diego, CA | 224.273     | 21.891  | Nov 2013   | 13.745                                                      | Nov 2014   | 24.355          | Nov 2015   | -                                               |            | 24.355              | 78.200           | 362.464    | 362.464                  |
| Primary Hardware Development (MQ-8)                                                                         | C/CPIF                 | Raytheon Corp : Falls Church, VA      | 16.251      | -       |            | 4.155                                                       | Nov 2014   | 7.000           | Nov 2015   | -                                               |            | 7.000               | 5.900            | 33.306     | 33.308                   |
| Subtotal                                                                                                    |                        |                                       | 240.524     | 21.891  |            | 17.900                                                      |            | 31.355          |            | -                                               |            | 31.355              | 84.100           | 395.770    | 395.772                  |
| Remarks                                                                                                     |                        |                                       |             |         |            |                                                             |            |                 |            |                                                 |            |                     |                  |            |                          |
| The FY16 increase supports integration of MQ-8C, radar and weapons capabilities into the program of record. |                        |                                       |             |         |            |                                                             |            |                 |            |                                                 |            |                     |                  |            |                          |
| Support (\$ in Millions)                                                                                    |                        |                                       |             | FY 2014 |            | FY 2015                                                     |            | FY 2016<br>Base |            | FY 2016<br>OCO                                  |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                                                                          | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost                                                        | Award Date | Cost            | Award Date | Cost                                            | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Integrated Logistics Support                                                                                | Various                | Various : Various                     | 3.977       | 2.100   | Nov 2013   | 4.420                                                       | Nov 2014   | 3.000           | Nov 2015   | -                                               |            | 3.000               | 11.900           | 25.397     | -                        |
| Subtotal                                                                                                    |                        |                                       | 3.977       | 2.100   |            | 4.420                                                       |            | 3.000           |            | -                                               |            | 3.000               | 11.900           | 25.397     | -                        |
| Test and Evaluation (\$ in Millions)                                                                        |                        |                                       |             | FY 2014 |            | FY 2015                                                     |            | FY 2016<br>Base |            | FY 2016<br>OCO                                  |            | FY 2016<br>Total    |                  |            |                          |
| Cost Category Item                                                                                          | Contract Method & Type | Performing Activity & Location        | Prior Years | Cost    | Award Date | Cost                                                        | Award Date | Cost            | Award Date | Cost                                            | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation                                                                             | WR                     | NAWCAD : PAXRV, MD                    | 9.971       | 4.500   | Nov 2013   | 5.100                                                       | Nov 2014   | 3.500           | Nov 2015   | -                                               |            | 3.500               | 10.900           | 33.971     | -                        |
| Operational Test & Evaluation/QRA                                                                           | WR                     | NAWCAD : PAXRV, MD                    | 2.331       | 1.600   | Nov 2013   | 2.400                                                       | Nov 2014   | 2.000           | Nov 2015   | -                                               |            | 2.000               | 4.200            | 12.531     | -                        |
| Prior Years T&E no longer funded in the FYDP                                                                | Various                | Various : Various                     | 0.342       | -       |            | -                                                           |            | -               |            | -                                               |            | -                   | -                | 0.342      | -                        |
| Subtotal                                                                                                    |                        |                                       | 12.644      | 6.100   |            | 7.500                                                       |            | 5.500           |            | -                                               |            | 5.500               | 15.100           | 46.844     | -                        |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy |                        |                                |             |         |            |                                                             |            |                 |            |                                                 |            |                  | Date: February 2015 |            |                          |
| Appropriation/Budget Activity<br>1319 / 7              |                        |                                |             |         |            | R-1 Program Element (Number/Name)<br>PE 0305231N / MQ-8 UAV |            |                 |            | Project (Number/Name)<br>2768 / MQ-8 Fire Scout |            |                  |                     |            |                          |
| Management Services (\$ in Millions)                   |                        |                                |             | FY 2014 |            | FY 2015                                                     |            | FY 2016<br>Base |            | FY 2016<br>OCO                                  |            | FY 2016<br>Total |                     |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location | Prior Years | Cost    | Award Date | Cost                                                        | Award Date | Cost            | Award Date | Cost                                            | Award Date | Cost             | Cost To Complete    | Total Cost | Target Value of Contract |
| Government Engineering Support                         | WR                     | NAWCAD : PAXRV, MD             | 43.579      | 6.222   | Nov 2013   | 7.380                                                       | Nov 2014   | 7.716           | Nov 2015   | -                                               |            | 7.716            | 19.200              | 84.097     | -                        |
| Program Management Support                             | Various                | Various : Various              | 6.471       | 5.100   | Nov 2013   | 5.624                                                       | Nov 2014   | 4.700           | Nov 2015   | -                                               |            | 4.700            | 12.800              | 34.695     | -                        |
| Travel                                                 | WR                     | NAVAIR : PAXRV, MD             | 0.833       | 0.300   | Nov 2013   | 0.470                                                       | Nov 2014   | 0.499           | Nov 2015   | -                                               |            | 0.499            | Continuing          | Continuing | Continuing               |
| Prior years Mgmt Svcs no longer funded in the FYDP     | Various                | Various : Various              | 2.301       | -       |            | -                                                           |            | -               |            | -                                               |            | -                | -                   | 2.301      | -                        |
| Subtotal                                               |                        |                                | 53.184      | 11.622  |            | 13.474                                                      |            | 12.915          |            | -                                               |            | 12.915           | -                   | -          | -                        |
| <b>Remarks</b><br>Travel contract type is TO.          |                        |                                |             |         |            |                                                             |            |                 |            |                                                 |            |                  |                     |            |                          |
|                                                        |                        |                                | Prior Years | FY 2014 |            | FY 2015                                                     |            | FY 2016<br>Base |            | FY 2016<br>OCO                                  |            | FY 2016<br>Total | Cost To Complete    | Total Cost | Target Value of Contract |
| Project Cost Totals                                    |                        |                                | 310.329     | 41.713  |            | 43.294                                                      |            | 52.770          |            | -                                               |            | 52.770           | -                   | -          | -                        |
| <b>Remarks</b>                                         |                        |                                |             |         |            |                                                             |            |                 |            |                                                 |            |                  |                     |            |                          |

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Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

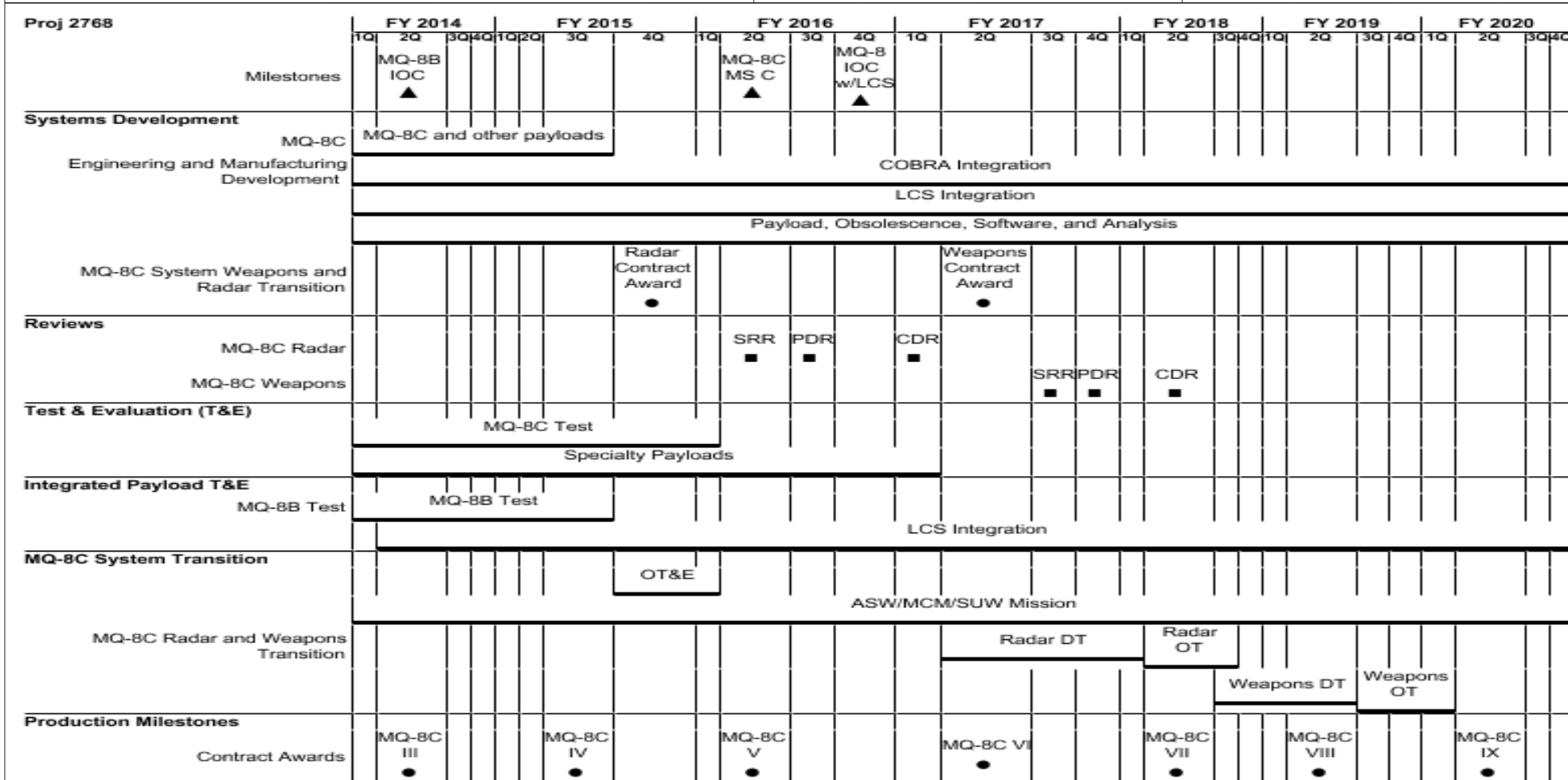
1319 / 7

R-1 Program Element (Number/Name)

PE 0305231N / MQ-8 UAV

Project (Number/Name)

2768 / MQ-8 Fire Scout



**UNCLASSIFIED**

PE 0305231N: MQ-8 UAV  
Navy

**UNCLASSIFIED**

|                                                               |                                                                    |                                                        |                            |
|---------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|----------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Navy |                                                                    |                                                        | <b>Date:</b> February 2015 |
| <b>Appropriation/Budget Activity</b><br>1319 / 7              | <b>R-1 Program Element (Number/Name)</b><br>PE 0305231N / MQ-8 UAV | <b>Project (Number/Name)</b><br>2768 / MQ-8 Fire Scout |                            |

**Schedule Details**

| <b>Events by Sub Project</b>                                                                                                                   | <b>Start</b>   |             | <b>End</b>     |             |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|----------------|-------------|
|                                                                                                                                                | <b>Quarter</b> | <b>Year</b> | <b>Quarter</b> | <b>Year</b> |
| <b>Proj 2768</b>                                                                                                                               |                |             |                |             |
| Milestones: MQ-8 Initial Operational Capability (IOC)                                                                                          | 2              | 2014        | 2              | 2014        |
| Milestones: MQ-8 Initial Operational Capability (IOC) - MQ-8C Littoral Combat Ship (LCS)                                                       | 4              | 2016        | 4              | 2016        |
| Milestones: MQ-8C Milestone C Decision                                                                                                         | 2              | 2016        | 2              | 2016        |
| Systems Development: MQ-8C: MQ-8C and other payloads                                                                                           | 1              | 2014        | 3              | 2015        |
| Systems Development: Engineering and Manufacturing Development: Coastal Battlefield Reconnaissance and Analysis Integration (COBRA), BLK 1/2/3 | 1              | 2014        | 4              | 2020        |
| Systems Development: Engineering and Manufacturing Development: Littoral Combat Ship (LCS) Integration                                         | 1              | 2014        | 4              | 2020        |
| Systems Development: Engineering and Manufacturing Development: Payload, Obsolescence, Software, and Analysis                                  | 1              | 2014        | 4              | 2020        |
| Systems Development: MQ-8C System Weapons and Radar Transition: Radar Contract Award                                                           | 4              | 2015        | 4              | 2015        |
| Systems Development: MQ-8C System Weapons and Radar Transition: Weapons Contract Award                                                         | 2              | 2017        | 2              | 2017        |
| Reviews: MQ-8C Radar: System Requirements Review (SRR)                                                                                         | 2              | 2016        | 2              | 2016        |
| Reviews: MQ-8C Radar: Preliminary Design Review (PDR)                                                                                          | 3              | 2016        | 3              | 2016        |
| Reviews: MQ-8C Radar: Critical Design Review (CDR)                                                                                             | 1              | 2017        | 1              | 2017        |
| Reviews: MQ-8C Weapons: System Requirements Review                                                                                             | 3              | 2017        | 3              | 2017        |
| Reviews: MQ-8C Weapons: Preliminary Design Review                                                                                              | 4              | 2017        | 4              | 2017        |
| Reviews: MQ-8C Weapons: Critical Design Review                                                                                                 | 2              | 2018        | 2              | 2018        |
| Test & Evaluation (T&E): MQ-8C Development Test                                                                                                | 1              | 2014        | 1              | 2016        |
| Test & Evaluation (T&E): Specialty Payloads                                                                                                    | 1              | 2014        | 1              | 2017        |

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2016 Navy **Date:** February 2015

|                                                  |                                                                    |                                                        |
|--------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|
| <b>Appropriation/Budget Activity</b><br>1319 / 7 | <b>R-1 Program Element (Number/Name)</b><br>PE 0305231N / MQ-8 UAV | <b>Project (Number/Name)</b><br>2768 / MQ-8 Fire Scout |
|--------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------|

| Events by Sub Project                                                                        | Start   |      | End     |      |
|----------------------------------------------------------------------------------------------|---------|------|---------|------|
|                                                                                              | Quarter | Year | Quarter | Year |
| Integrated Payload T&E: MQ-8B Test: MQ-8B                                                    | 1       | 2014 | 3       | 2015 |
| Integrated Payload T&E: MQ-8B Test: Littoral Combat Ship (LCS) Integration                   | 2       | 2014 | 4       | 2020 |
| MQ-8C System Transition: Operational Test and Evaluation (OT&E)                              | 4       | 2015 | 1       | 2016 |
| MQ-8C System Transition: ASW/MCM/SUM Mission                                                 | 1       | 2014 | 4       | 2020 |
| MQ-8C System Transition: MQ-8C Radar and Weapons Transition: Radar Developmental Test (DT)   | 2       | 2017 | 1       | 2018 |
| MQ-8C System Transition: MQ-8C Radar and Weapons Transition: Radar Operational Test (OT)     | 2       | 2018 | 3       | 2018 |
| MQ-8C System Transition: MQ-8C Radar and Weapons Transition: Weapons Developmental Test (DT) | 3       | 2018 | 2       | 2019 |
| MQ-8C System Transition: MQ-8C Radar and Weapons Transition: Weapons Operational Test (OT)   | 3       | 2019 | 1       | 2020 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C III                               | 2       | 2014 | 2       | 2014 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C IV                                | 3       | 2015 | 3       | 2015 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C V                                 | 2       | 2016 | 2       | 2016 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C VI                                | 2       | 2017 | 2       | 2017 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C VII                               | 2       | 2018 | 2       | 2018 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C VIII                              | 2       | 2019 | 2       | 2019 |
| Production Milestones: Contract Awards: Air Vehicles MQ-8C IX                                | 2       | 2020 | 2       | 2020 |