| Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy | | | | | | | | | | | Date: March 2024 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development* | | | | | R-1 Program Element (Number/Name)<br>PE 0205633N *I Aviation Improvements* | | | | | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2023** | **FY 2024** | **FY 2025 Base** | **FY 2025 OCO** | **FY 2025 Total** | **FY 2026** | **FY 2027** | **FY 2028** | **FY 2029** | **Cost To Complete** | **Total Cost** |
| Total Program Element | 2,000.981 | 149.673 | 143.277 | 136.276 | - | 136.276 | 131.584 | 125.950 | 129.013 | 130.130 | Continuing | Continuing |
| 0357: *IFDIS fault detection* | 0.000 | 0.000 | 2.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 2.000 |
| 0601: *Acft Handling & Service Equip* | 55.569 | 2.578 | 9.390 | 9.188 | - | 9.188 | 7.809 | 2.328 | 2.396 | 2.447 | Continuing | Continuing |
| 0852: *Consolidated Auto Support System* | 216.182 | 12.452 | 7.463 | 8.902 | - | 8.902 | 8.581 | 8.652 | 8.812 | 8.992 | Continuing | Continuing |
| 1041: *Aircraft Equipment Reliability/Maintainability Improvement Program (AERMIP)* | 74.408 | 6.477 | 5.455 | 4.956 | - | 4.956 | 4.857 | 4.267 | 4.039 | 4.126 | Continuing | Continuing |
| 1355: *Propulsion and Power Component Improvement Program* | 1,638.411 | 109.823 | 114.959 | 107.757 | - | 107.757 | 108.345 | 109.209 | 112.271 | 114.565 | Continuing | Continuing |
| 1356: *Corrosion Prevention Improvements* | 0.000 | 0.000 | 4.010 | 5.473 | - | 5.473 | 1.992 | 1.494 | 1.495 | 0.000 | 0.000 | 14.464 |
| 9999: *Congressional Adds* | 16.411 | 18.343 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 34.754 |

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

Project 0601 - Common Ground Equipment is a Naval Aviation Project to apply new technology to common support equipment due to obsolescence necessary to support multiple systems/aircraft within the Navy.

Project 0852: Consolidated Automated Support System (CASS) is a standardized Automated Test Equipment (ATE) with computer assisted, multi-function capabilities to support the maintenance of aircraft weapons systems and missiles. Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) testers another type of standardized Automated Test Equipment with computer assisted, multi-function capabilities to support the maintenance of aircraft weapons systems. ATE host, and their Test Program Sets, along with associated ancillary are considered Automatic Test Systems (ATS). Line adjusted from "eCASS Modernization", to "ATS Modernization" to reflect inclusion of Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) testers.

Project 1041 - Aircraft Equipment Reliability/Maintainability Improvement Program is the only Navy program that provides engineering support for in-service out-of-production aircraft equipment and provides increased readiness at reduced operational and support cost.

| Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy | Date: March 2024 |
|---|---|
| **Appropriation/Budget Activity**<br>1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development* | **R-1 Program Element (Number/Name)**<br>PE 0205633N *I Aviation Improvements* |

Project 1355 - Aircraft Engine Component Improvement Program develops reliability and maintainability and safety enhancements for in-service Navy aircraft engines, transmissions, propellers, starters, auxiliary power units, electrical generating systems, fuel systems, fuels, and lubricants.

Project 1356 - Corrosion Prevention Improvements supports Flag Officer (FO) endorsed N98 FRT initiative # POM24-28. This funding will enable the NAE to establish a Center of Excellence for Corrosion and Finish (CoECF) Training focused on educating, training, and certifying qualified, proficient maintainers capable of performing: corrosion identification, corrosion inspection, corrosion prevention, corrosion repair and restoration. Qualified, proficient maintainers will improve material readiness through improved material condition, while also developing the knowledge & maintenance skills of Sailors and Marines.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.

| B. Program Change Summary ($ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Previous President's Budget | 149.450 | 143.277 | 129.173 | - | 129.173 |
| Current President's Budget | 149.673 | 143.277 | 136.276 | - | 136.276 |
| Total Adjustments | 0.223 | 0.000 | 7.103 | - | 7.103 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | 3.006 | 0.000 | | | |
| • SBIR/STTR Transfer | -2.783 | 0.000 | | | |
| • Program Adjustments | 0.000 | 0.000 | 6.131 | - | 6.131 |
| • Rate/Misc Adjustments | 0.000 | 0.000 | 0.972 | - | 0.972 |

| Congressional Add Details ($ in Millions, and Includes General Reductions) | FY 2023 | FY 2024 |
|---|---|---|
| **Project:** 9999: *Congressional Adds* | | |
| Congressional Add: *Autonomous FOD mitigation technology* | 14.482 | 0.000 |
| Congressional Add: *Augmented reality remote maintenance services* | 3.861 | 0.000 |
| Congressional Add Subtotals for Project: 9999 | 18.343 | 0.000 |
| Congressional Add Totals for all Projects | 18.343 | 0.000 |

| Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy | Date: March 2024 |
|---|---|
| **Appropriation/Budget Activity**<br>1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development* | **R-1 Program Element (Number/Name)**<br>PE 0205633N *I Aviation Improvements* |

**Change Summary Explanation**

Funding: $7.103M overall PE increase since the previous President's Budget submission due to the following adjustments:
Project 0601: Increase of $6.885M for I-Level Engine Test Instrumentation Replacement System (ETIRS) Programmatic Adjustment/Misc Adjustments.
Project 0852: Decrease of $.108 million for rate/misc adjustments.
Project 1356: Increase of $5.473 million for corrosion prevention improvement.
Project 1355: Reduced by $4.211 million for Programmatic/Rate/Misc Adjustments.
Project 1041: Reduced by $.936 million for Programmatic/Rate/Misc Adjustments.

Schedule:
Project 0601: Engine Test Instrumentation Replacement System (ETIRS) changes include Milestone C from 2nd FY25 to 4th FY26, Milestone B from 1st FY24 to 2nd FY24, FRPDR from 2nd FY26 to 4th FY26, DT-B1 from 1st FY25 to 3rd FY26, DT-C1 from 3rd FY25 to 2nd FY27, SVR/PRR from 1st FY26 to 4th FY26, and TRR from 2nd FY25 to 3rd FY26. Changes due to finalization of ETIRS Acquisition Strategy. AMAS Production Delivery, Release 17 and 18 adjusted from 1st FY26 and 1st FY27 to 4th FY26 and 4th FY27. Change due to error in PB24. AMAS 19 and 20 Efforts added for FY28-FY29.

Technical:

Project 0601: Under Aviation Maintenance Advancement Solutions (AMAS) Project new Augmented Reality Remote Maintenance Services (ARRMS) effort introduced in FY25. The ARRMS is a Department of the Navy (DoN) developed software suite. Providing real-time communication between a Subject Matter Expert (SME) and a maintainer.

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>0357 / *IFDIS fault detection* | |

| COST ($ in Millions) | Prior Years | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0357: *IFDIS fault detection* | 0.000 | 0.000 | 2.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 2.000 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

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

Target efforts aimed at reducing intermittent faults in Electrical Wiring Interconnect System (EWIS) on aircraft to improve readiness and reduce related non-value-added maintenance costs. Conduct trade studies to determine the significance of intermittence, assess the effectivity of existing fielded test aircraft wiring test equipment to combat EWIS intermittence and to perform gap analyses between the causes of intermittence and the capabilities of equipment for detecting these issues.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| ***Title:*** IFDIS fault detection | 0.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Provide support to rapid fielding of Electrical Intermittent Fault Detection Systems. Effectivity of existing EWIS test equipment. Data Identification and Data analytics optimization. Assessment of NAVAIR's EWIS intermittence problem. | | | | | |
| ***FY 2025 Base Plans:***<br>N/A | | | | | |
| ***FY 2025 OCO Plans:***<br>N/A | | | | | |
| ***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $2.000M from FY2024 to FY2025 due to one year effort. | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.000 | 2.000 | 0.000 | 0.000 | 0.000 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

This is a NON-ACAT program. Procurement strategy is determined by market survey and cooperative opportunities.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0357 / *IFDIS fault detection* |

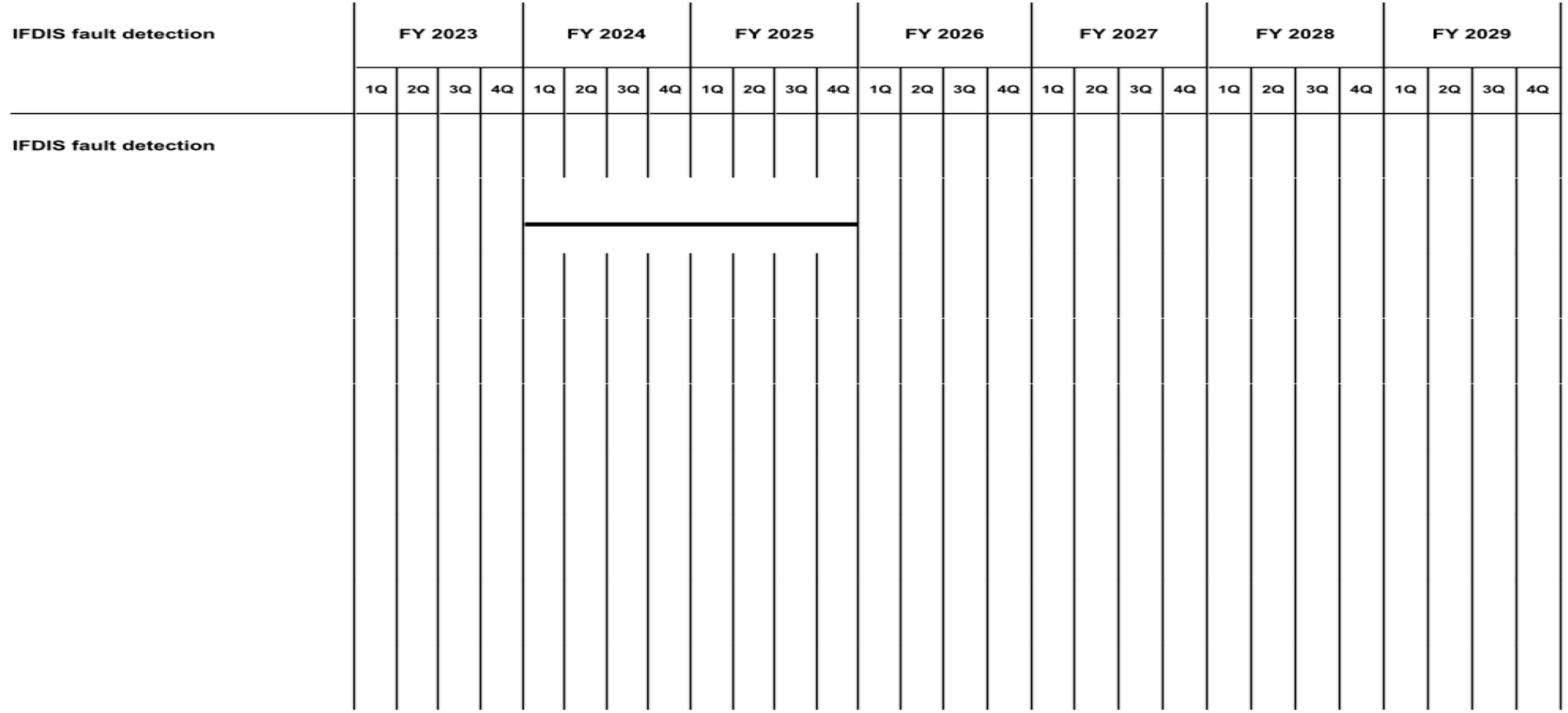
**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Systems Engineering | WR | NAWCAD : Patuxent River | 0.000 | 0.000 | | 2.000 | Oct 2023 | 0.000 | | - | | 0.000 | 0.000 | 2.000 | - |
| | | **Subtotal** | 0.000 | 0.000 | | 2.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.000 | N/A |

| | Prior Years | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 0.000 | 0.000 | | 2.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.000 | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0357 / *IFDIS fault detection* |




*2025DON - 0205633N - 0357*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0357 / *IFDIS fault detection* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***IFDIS fault detection*** | | | | |
| IFDIS fault detection: Design & Development | 1 | 2024 | 4 | 2025 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | | | | | | | | Date: March 2024 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | | | | | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | | | | Project (Number/Name)<br>0601 / *Acft Handling & Service Equip* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2023** | **FY 2024** | **FY 2025 Base** | **FY 2025 OCO** | **FY 2025 Total** | **FY 2026** | **FY 2027** | **FY 2028** | **FY 2029** | **Cost To Complete** | **Total Cost** |
| 0601: *Acft Handling & Service Equip* | 55.569 | 2.578 | 9.390 | 9.188 | - | 9.188 | 7.809 | 2.328 | 2.396 | 2.447 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | 3 | - | - | - | - | - | - | - | | |

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

Common Ground Equipment is a Naval Aviation Project to apply new technology to common support equipment due to obsolescence necessary to support multiple systems/aircraft within the Navy. The common support equipment items developed with this budget are briefed to the Air Force, Army and Coast Guard for possible use in joint procurement in the production phase.

Crash cranes are used for lifting and moving disabled aircraft on CVN and L-Class ship flight decks. The Carrier/Amphibious Assault Ship Crash Crane (CV/AACC) will be a diesel powered lift system performing crash and salvage functions on board CVN and L-class ships. The CV/AACC will replace the legacy A/S32A-35A, Carrier Vessel Crash Crane (CVCC) and the A/S32A-36A Amphibious Assault Crash Crane (AACC). The CV/AACC will support all aircraft on CVN and L-Class ships.

Recent transition has merged existing Portable Electronic Maintenance Aids (PEMA) and Standard PEMA Cyber Solution (SPEC) project lines under Aviation Maintenance Advancement Solutions (AMAS). Funding supports the evaluation, testing and integration to develop PEMA Commercial solution for portable device deployments across the Naval Aviation Enterprise. PEMA is a portable device utilized by maintainers with the implementation of digital maintenance capabilities (digital publications, Interactive Electronic Technical Manuals, Internet Protocol based data uploads, Binary digit data downloads, automated diagnostics, and planeside Naval Aviation Logistics Command/Management Information System. PEMAs are mandatory display devices supporting modern day Automated Maintenance Environment implemented for weapon systems.

Future Readiness Initiative to Develop SPECS architecture for all PEMAs to standardize software across NAE, leverage existing enterprise tools, and to correct cyber shortfalls identified by the Cyber Warfare Detachment (CWD). A Cyber Risk Assessment (CRA) identified vulnerabilities on the PEMA system that could be exploited to threaten U.S. capabilities. A new software image and configuration management process has been identified to mitigate the top 60% of identified risk groups and 100% of penetration test findings from the CRA.

The global COVID-19 pandemic has highlighted the inherent flaw that exists with our current means of providing maintenance support, regardless of system: The requirement to travel around the globe to the maintenance site in order to support the fleet. The inability to operate in 2020 brought the need for a new capability to the forefront: the capability to provide real-time maintenance support remotely. Virtual assistance has been identified to provide subject matter expert (SME) to the maintainer in real-time through voice/chat communication and indications through holograms overlaid within the maintainers view allowing guidance with highlight items of interest on the equipment being worked. This will reduce maintenance action complexity to ultimately reduce Mean-Time-To-Repair (MTTR) metrics and increase Aircraft Availability.

Engine Test Instrumentation Replacement System (ETIRS) provides post maintenance Navy and Marine Corps Intermediate (I) - Level out-of-airframe test capability, for various aircraft engines. It will be used at shipboard and land-based engine test activities to support testing of turbofan, turboshaft and turboprop engines. ETIRS

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

will include development of unique Engine Test Program Sets (TPSs). The Legacy ETI systems are reaching end of life and exhibiting significant obsolescence issues impacting sustainment.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| ***Title:*** Engine Test Instrumentation Replacement System (ETIRS) | 0.000 | 7.000 | 6.906 | 0.000 | 6.906 |
| ***Articles:*** | - | 3 | - | - | - |
| ***Description:*** Due to obsolescence, sustainment and calibration challenges, replace legacy ETI systems with new universal ETI system. Consider a single design solution that can operate all three engine variants. Obtain data rights to facilitate economical sustainment decisions. Provide a design for optimum maintainability and supportability. Establish a sustainment structure that will address future obsolescence. Establish In-house Navy Calibration capabilities. Establish intermediate maintenance level repair procedures both ashore and afloat.<br><br>***FY 2024 Plans:***<br>Conduct test & evaluation of ETI Replacement System (ETIRS).<br><br>***FY 2025 Base Plans:***<br>Conduct test & evaluation of ETI Replacement System (ETIRS).<br><br>***FY 2025 OCO Plans:***<br>N/A<br><br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>The Engine Test Instrumentation Replacement System (ETIRS) budget requirements decreased from FY24 to FY25 due to projected annual rate decreases to direct labor categories including but are not limited to engineering, maintenance/support, tooling, quality control, manufacturing, and integration. | | | | | |
| ***Title:*** Aviation Maintenance Advancement Solutions (AMAS) | 2.325 | 2.390 | 2.282 | 0.000 | 2.282 |
| ***Articles:*** | - | - | - | - | - |
| ***Description:*** Aviation Maintenance Advancement Solutions (AMAS) has formed by the merge of The Portable Electronic Maintenance Aid (PEMA)and Standard PEMA Cyber Solution (SPECS). Portable Electronic Maintenance Aid (PEMA) funding supports the evaluation, testing and integration to develop PEMA Commercial Off-the-Shelf (COTS) solution for portable device deployments across the Naval Aviation Enterprise. PEMAs are portable devices utilized by maintainers with the implementation of digital maintenance capabilities (digital publications, Interactive Electronic Technical Manuals, Internet Protocol based data uploads, Binary digit data downloads, automated diagnostics, and planeside Naval Aviation Logistic Command Management Information System. PEMAs are a mandatory display device supporting modern day Automated Maintenance Environment implemented for weapon systems. | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Cyber Risk Assessment (CRA) has identified cyber vulnerabilities that could be exploited to threaten US fighting forces. Implementation of mandatory Cyber Security (CS) requirements would decrease the CS attack surface. Develop Standard PEMA Cyber Solution (SPECS) architecture for all PEMAs to standardize software across NAE, leverage existing enterprise tools, and to correct cyber shortfalls identified by the Cyber Warfare Detachment (CWD) Cyber Risk Assessment (CRA). Implement CS enhancements to reduce risk from cyber-attack.<br><br>A key challenge to the maintenance of complex systems is accessing expertise at the point-of-need. Mission Capable rates suffer because authoritative knowledge and experience on complex repairs is difficult to access, geographically remote, or organizationally segregated. Develop virtual assistance from a subject matter expert (SME) to the maintainer in real-time through voice/chat communication and indications through hologram overlays within the maintainers view allowing guidance with highlight items of interest on the equipment being worked.<br><br>The Augmented Reality Remote Maintenance Services (ARRMS) is a Department of the Navy (DoN) developed software suite. Providing real-time communication between a Subject Matter Expert (SME) and a maintainer. Enabling remote maintenance assistance, reducing the need to travel to the maintenance site. ARRMSS will enable maintainers at all Organizational, Intermediate, and Depot level sites to have immediate SME assistance on all maintenance actions, as well as being able to provide remote training.<br><br>***FY 2024 Plans:***<br>Evaluate, test and integrate evolving COTS solutions. Conduct test & evaluation of T/M/S peculiar software/ hardware requirements and network connectivity compliance across the GIG prior to deployment to the fleet by a yearly release cycle. Develop Standard PEMA Cyber Solution (SPECS) core software enhancements to correct cyber shortfalls and develop/integrate T/M/S unique applications hosted on a common image. Develop virtual assistance capability to include real-time voice/chat communication and indications through holograms overlays. Develop and test the remote assistance capability across multiple maintenance locations. Develop remote assistance connections to unique networking protocol and analyze and develop necessary documentation for Authority to Operate (ATO) on multiple networks. Test and evaluate remote assistance software/hardware to provide virtual assistance to operate in austere environments including sea, shore and forward deployed.<br><br>***FY 2025 Base Plans:*** | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Evaluate, test and integrate evolving COTS solutions. Conduct test & evaluation of T/M/S peculiar software/ hardware requirements and network connectivity compliance across the GIG prior to deployment to the fleet by a yearly release cycle. Develop Standard PEMA Cyber Solution (SPECS) core software enhancements to correct cyber shortfalls and develop/integrate T/M/S unique applications hosted on a common image. Develop virtual assistance capability to include real-time voice/chat communication and indications through holograms overlays. Develop and test the remote assistance capability across multiple maintenance locations. Develop remote assistance connections to unique networking protocol and analyze and develop necessary documentation for Authority to Operate (ATO) on multiple networks. Test and evaluate remote assistance software/hardware to provide virtual assistance to operate in austere environments including sea, shore and forward deployed. Develop ARRMS software suite providing real-time communication between a Subject Matter Expert (SME) and a maintainer.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Aviation Maintenance Advancement Solutions (AMAS) budget requirements decreased from FY24 to FY25 due to projected annual rate decreases to direct labor categories including but are not limited to engineering, maintenance/support, tooling, quality control, manufacturing, and integration. | | | | | |
| ***Title:*** Carrier/Amphibious Assault Ship Crash Crane (CV/AACC)<br>***Articles:***<br>***Description:*** Carrier/Amphibious Assault Ship Crash Cranes (CV/AACC) are required to remove damaged aircraft from the flight deck. Legacy crash cranes were designed in the late 1980's, major systems are beginning to experience the obsolescence of spare parts and are in need of updating. R&D resources are needed to identify not only replacements, but new technologies, which can increase the reliability and maintainability of this flight ops critical piece of equipment. Systems updates would include the engine/generator and electrical updates to the motor drive/control system. An exploration of power sources other than diesel engines would be considered and a corrosion resistant boom.<br>***FY 2024 Plans:***<br>N/A<br>***FY 2025 Base Plans:*** | 0.253<br>- | 0.000<br>- | 0.000<br>- | 0.000<br>- | 0.000<br>- |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| N/A<br>***FY 2025 OCO Plans:***<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 2.578 | 9.390 | 9.188 | 0.000 | 9.188 |

**C. Other Program Funding Summary ($ in Millions)**

| Line Item | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • APN/0705: *Ground Support Equipment - CSE/ICP* | 77.456 | 79.532 | 97.553 | - | 97.553 | 81.234 | 85.799 | 84.372 | 86.084 | Continuing | Continuing |
| • OPN/4268: *Aviation Support Equipment - PEMA* | 17.233 | 17.026 | 17.372 | - | 17.372 | 17.859 | 18.208 | 18.680 | 19.068 | Continuing | Continuing |

**Remarks**

**D. Acquisition Strategy**

Common Ground Equipment: This is a non ACAT program. Field activities propose tentative projects. Internal panel merits and selects projects. Field activities develop projects and submit results. Operational Advisory Group process selects projects to transition to procurement.

Carrier/Amphibious Assault Ship Crash Crane (CV/AACC): Market research results indicated multiple companies have the potential to develop (modified COTS) and manufacture crash cranes that meet the specification requirements, inclusive of the lift requirements and unique shipboard environmental requirements including shock, vibration, Electromagnetic Interference (EMI) and ship motion characteristics. The program entered the acquisition process at Milestone B (MS-B). A best value, competitive, Firm Fixed Price (FFP) Indefinite Delivery, Indefinite Quantity (IDIQ) contract was awarded 7/2019.

The selected contractor will design, develop, manufacture, test, and deliver one (1) CCSCs and one (1) ACSC Engineering Development Model (EDM), along with all required technical data and logistics documentation. Following MS C approval, one (1) CCSC and one (1) ACSC LRIP will be procured to support DT-C1 testing and production. Following FRPDR approval, 25 additional production units consisting of 13 CCSCs and 12 ACSCs will be procured using priced delivery orders which will meet the total fleet inventory of 27 units.

Recent transition has merged existing PEMA, SPECS, and ARMS (Augmented Reality Maintenance System) project lines under Aviation Maintenance Advancement Solutions (AMAS). The management approach includes the Program Management Office residing at NAVAIR with Milestone Decision Authority delegated to the Naval Air Systems Command Chief Information Officer. The agile development approach will be used to execute requirements as sprints. Contracting for the prime integrator will be via competitively awarded Indefinite Delivery/Indefinite Quantity contracts.

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

The ETIRS program will enter the acquisition process at Milestone B (MS-B) and leverage existing Navy Automated Test System (ATS) common architecture and logistics through a government lead effort in order to speed development and reduce program costs. Contracting for the production ETIRS systems post MS-C will be via a competitively awarded Firm Fixed Price (FFP) Indefinite Delivery/Indefinite Quantity (IDIQ) contract.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>0601 / *Acft Handling & Service Equip* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hdw Dev - CV | C/FFP | Allied Systems Company : Sherwood, OR | 9.607 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 9.607 | 9.607 |
| Systems Engineering - CV | WR | NAWCAD : LAKEHURST, NJ | 5.024 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| Systems Engineering - AMAS | C/IDIQ | Ricardo Defense : Troy, MI | 2.735 | 1.962 | Dec 2022 | 1.489 | Dec 2023 | 0.569 | Dec 2024 | - | | 0.569 | 0.000 | 6.755 | 6.755 |
| Primary Hdw Dev - ETIRS | C/FFP | TBD : TBD | 0.000 | 0.000 | | 6.000 | Dec 2023 | 6.906 | Dec 2024 | - | | 6.906 | 0.000 | 12.906 | 12.906 |
| Prior year Prod Dev cost no longer funded in the FYDP | Various | Various : Various | 19.692 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 19.692 | - |
| | | **Subtotal** | 37.058 | 1.962 | | 7.489 | | 7.475 | | - | | 7.475 | Continuing | Continuing | N/A |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Systems Engineering - ETIRS | WR | NAWCAD : LAKEHURST, NJ | 0.000 | 0.000 | | 1.000 | Nov 2023 | 0.000 | | - | | 0.000 | 0.000 | 1.000 | - |
| Systems Engineering - AMAS | WR | NAWCAD : LAKEHURST, NJ | 0.000 | 0.000 | | 0.000 | | 1.580 | Dec 2024 | - | | 1.580 | 0.000 | 1.580 | - |
| Prior year Support cost no longer funded in the FYDP | Various | Various : Various | 8.857 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 8.857 | - |
| | | **Subtotal** | 8.857 | 0.000 | | 1.000 | | 1.580 | | - | | 1.580 | 0.000 | 11.437 | N/A |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Developmental Test & Evaluation (DT&E) | WR | NAWCAD : PAX RIVER, MD | 2.374 | 0.253 | Dec 2022 | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>0601 / *Acft Handling & Service Equip* | |

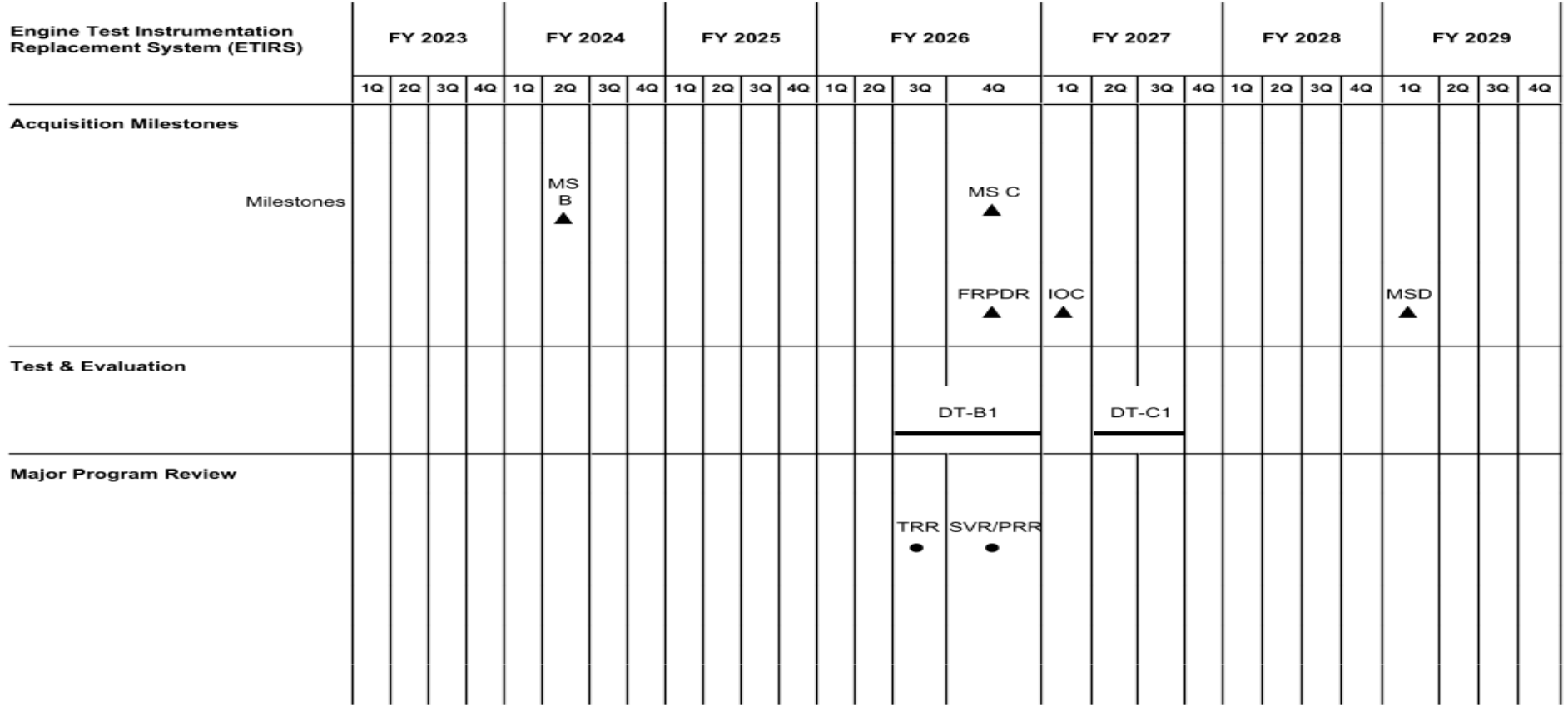
**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E) | WR | NAWCAD : PAX RIVER, MD | 2.391 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.391 | - |
| Developmental Test & Evaluation (DT&E) | WR | FRC SE : Jacksonville, FL | 3.970 | 0.363 | Dec 2022 | 0.901 | Dec 2023 | 0.133 | Dec 2024 | - | | 0.133 | 0.000 | 5.367 | - |
| Developmental Test & Evaluation (DT&E) | Various | Various : Various | 0.919 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.919 | - |
| | | **Subtotal** | 9.654 | 0.616 | | 0.901 | | 0.133 | | - | | 0.133 | Continuing | Continuing | N/A |

| | Prior Years | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 55.569 | 2.578 | | 9.390 | | 9.188 | | - | | 9.188 | Continuing | Continuing | N/A |

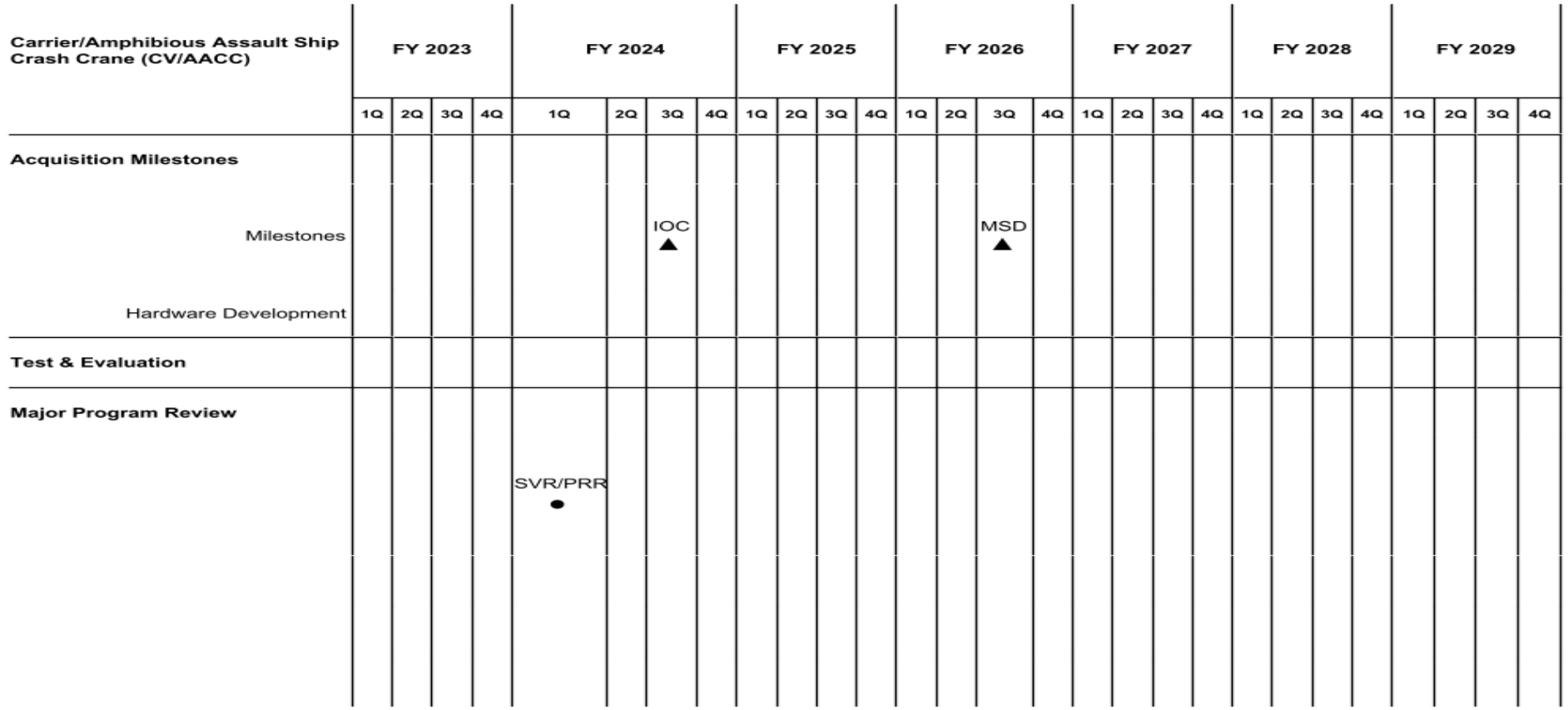
**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |



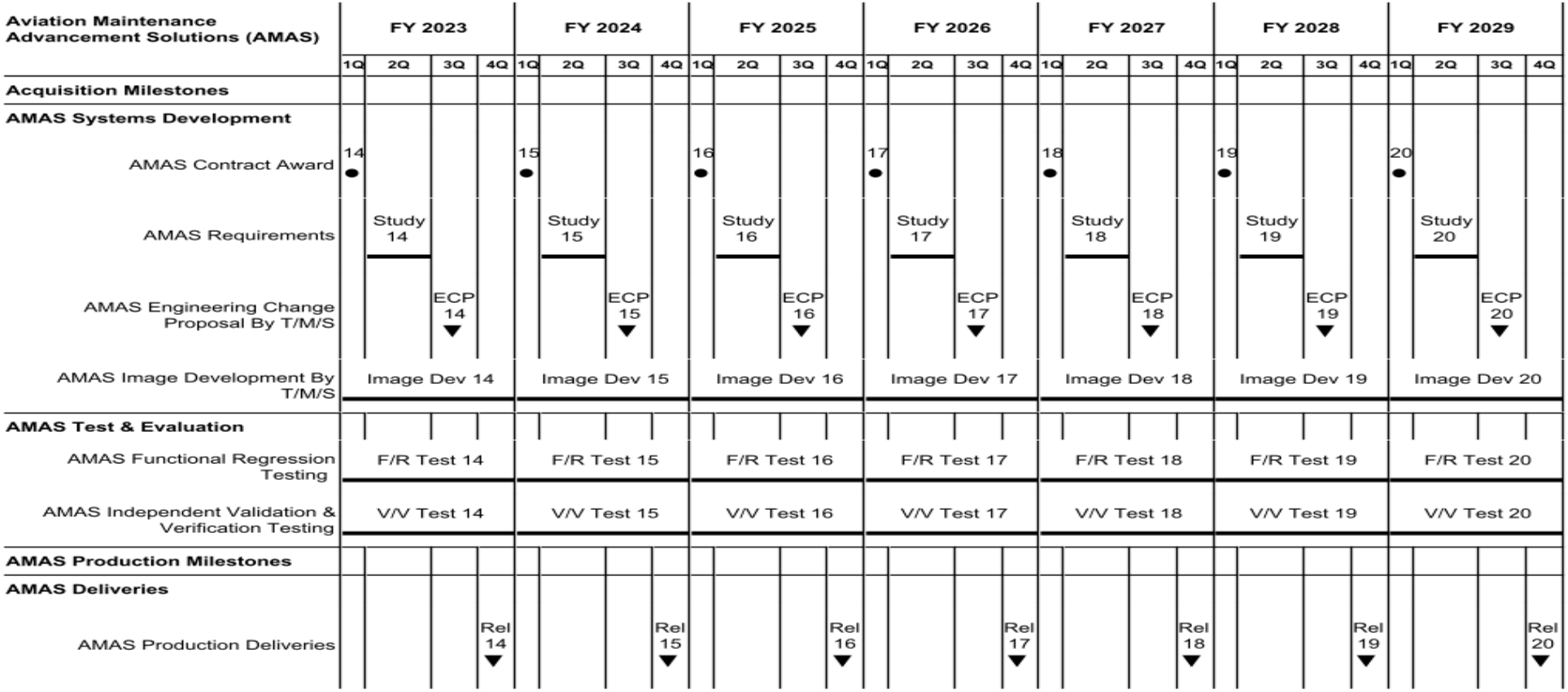

*2025DON - 0205633N - 0601*

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |




2025DON - 0205633N - 0601

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |




*2025DON - 0205633N - 0601*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0601 / *Acft Handling & Service Equip* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Engine Test Instrumentation Replacement System (ETIRS)*** | | | | |
| Acquisition Milestones: Milestones: MILESTONE C | 4 | 2026 | 4 | 2026 |
| Acquisition Milestones: Milestones: MILESTONE B | 2 | 2024 | 2 | 2024 |
| Acquisition Milestones: Milestones: FRPDR | 4 | 2026 | 4 | 2026 |
| Acquisition Milestones: Milestones: IOC | 1 | 2027 | 1 | 2027 |
| Acquisition Milestones: Milestones: MSD | 1 | 2029 | 1 | 2029 |
| Test & Evaluation: DT-B1 | 3 | 2026 | 4 | 2026 |
| Test & Evaluation: DT-C1 | 2 | 2027 | 3 | 2027 |
| Major Program Review: SVR/PRR | 4 | 2026 | 4 | 2026 |
| Major Program Review: TRR | 3 | 2026 | 3 | 2026 |
| ***Carrier/Amphibious Assault Ship Crash Crane (CV/AACC)*** | | | | |
| Acquisition Milestones: Milestones: IOC | 3 | 2024 | 3 | 2024 |
| Acquisition Milestones: Milestones: MSD | 3 | 2026 | 3 | 2026 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | | | | | | | | Date: March 2024 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | | | | | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | | | | Project (Number/Name)<br>0852 / *Consolidated Auto Support System* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2023** | **FY 2024** | **FY 2025 Base** | **FY 2025 OCO** | **FY 2025 Total** | **FY 2026** | **FY 2027** | **FY 2028** | **FY 2029** | **Cost To Complete** | **Total Cost** |
| 0852: *Consolidated Auto Support System* | 216.182 | 12.452 | 7.463 | 8.902 | - | 8.902 | 8.581 | 8.652 | 8.812 | 8.992 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | 3 | - | - | - | - | - | - | - | | |

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

The electronic Consolidated Automated Support System (eCASS) project is the system design and development of the latest generation of the US Navy's CASS family of automatic test systems. The legacy CASS system was designed and developed in the 1980's and commenced fielding in 1992. As such, it is reaching the end of its useful life due to obsolescence issues. eCASS is the replacement system for legacy CASS systems, which provides Naval aircraft avionics component maintenance and repair support at Intermediate and Depot maintenance facilities both shore-based and afloat. As a CASS replacement program, the eCASS program objectives remain the same as that of CASS. Specifically: (1) increase material readiness; (2) reduce life cycle costs; (3) improve tester sustainability at depot and intermediate maintenance levels; (4) reduce proliferation of unique test equipment, and (5) provide test capability for existing and emerging avionics/electronics aircraft weapon systems.

The Test Technology development project includes analysis, application, maturation, integration and testing of emerging electronic, mechanical, and optical test technologies for potential military utility for emerging requirements or obsolescence resolution in support of Naval avionics testing and repair. Specifically included are next-generation, electro-optics, synthetic instruments, high-speed bus technologies, inertial device technologies, and various other elements of modernization for legacy Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) test systems, as well as the Consolidated Automated Support System (CASS) family of testers and other Automatic Test Systems (ATS) Support Equipment (SE) which supports the testing and repair of any Naval aviation equipment, including associated Test Program Sets (TPSs), and ancillary equipment.

Automatic Test Systems (ATS) Modernization project includes efforts to address modernization and required obsolescence analysis and updates for legacy Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) test systems, as well as the Consolidated Automated Support System (CASS) family of testers as ATS. The ATS encompasses both
software and hardware updates. Modernization required to support emerging T/M/S technologies such as next-generation electro-optics, synthetic instruments, high-speed bus technologies, inertial device technologies needed for ATS support. Efforts cover the Electronic Warfare (EW) Testers, eCASS, their ancillary and any required Test Program Sets
(TPSs) and ancillary equipment.

The Third Generation Electro-Optical (EO3) Technology Development project consists of the design and development of technology solutions, including a near-infrared camera solution to replace the existing obsolete EO3 console camera, for use in 65 fielded Navy test systems at both shore-based and afloat sites. The EO3 console subsystem is hosted by the US Navy Consolidated Automated Support System (CASS/eCASS) family of automatic test systems and is used to test, diagnose and repair the H-60 Multi-spectral Targeting System (MTS) and F/A-18 Advanced Targeting Forward Looking Infrared (ATFLIR) weapon systems. The objective of the EO3 Technology Development project is to extend the useful life of fielded EO3 systems in order to sustain H-60 MTS and F/A-18 ATFLIR weapon system readiness until the EO4 replacement system can be designed, developed, produced, and fielded.

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |

The Fourth Generation Electro-Optical (EO4) development project consists of the design and development of the latest generation electro-optic test console for use with the electronic CASS (eCASS) automatic test system. The EO4 system will replace the legacy Third Generation Electro-Optical (EO3) system, which is facing imminent obsolescence, in providing test, repair, and maintenance capability for Naval and Marine Corps electro-optic weapon systems at both shore-based and afloat sites. As an EO3 replacement program, the EO4 program objectives remain the same as EO3. Specifically: (1) provide test capability for existing and emerging electro-optic weapon systems and components; (2) reduce life-cycle costs; (3) improve sustainability at intermediate and depot levels of maintenance; and (4) reduce proliferation of unique test equipment.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| ***Title:*** Test Technology Development | 3.982 | 3.230 | 3.816 | 0.000 | 3.816 |
| ***Articles:*** | - | 3 | - | - | - |
| ***Description:*** Develops, integrates, and evolves enhanced test capabilities and technologies for insertion into legacy Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) test systems, as well as the Consolidated Automated Support System (CASS) family of test systems and other Automatic Test Systems (ATS) Support Equipment (SE). As aviation and weapon system evolve, new test capabilities and cyber techniques are required to support advanced systems. Existing test capabilities must be extended in range, accuracy, time and frequency domains in order to sustain the required test accuracy ratios for weapon systems support (the Automatic Test System must be at least four times as accurate as the asset being tested).<br>***FY 2024 Plans:***<br>Continue evaluation of advanced technologies to support additional test requirements.<br>***FY 2025 Base Plans:***<br>Continue evaluation of advanced technologies to support additional test requirements.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Increase driven by need to keep current with emerging requirements and technologies. New requirements and increased supply chain cost are contributing factors. | | | | | |
| ***Title:*** ATS Modernization/Product Improvement | 3.911 | 3.564 | 4.906 | 0.000 | 4.906 |
| ***Articles:*** | - | - | - | - | - |
| ***Description:*** ATS Modernization project includes efforts to address modernization and required obsolescence analysis and updates for legacy Electronic Warfare (EW) and Communication, Navigation and Identification (CNI) test systems, as well as the Consolidated Automated Support System (CASS) family of testers and other | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Automatic Test Systems (ATS) Support Equipment (SE). The ATS encompasses both software and hardware updates. Modernization required to support emerging T/M/S technologies such as next-generation electro-optics, synthetic instruments, high-speed bus technologies, inertial device technologies needed for ATS support. Efforts cover the Electronic Warfare (EW) Testers, eCASS, and their ancillary and any required Test Program Sets (TPSs) and ancillary equipment.<br><br>***FY 2024 Plans:***<br>Electronic Warfare (EW)Testers and eCASS modernization efforts to address emerging avionics requirements for various<br>T/M/S to include F-35, E-2D, F/A-18 E/F/G. This includes addressing their legacy Test Program Sets and Ancillary<br>requirements.<br><br>***FY 2025 Base Plans:***<br>Electronic Warfare (EW)Testers and eCASS modernization efforts to address emerging avionics requirements for various<br>T/M/S to include F-35, E-2D, F/A-18 E/F/G. This includes addressing their legacy Test Program Sets and Ancillary<br>requirements.<br><br>***FY 2025 OCO Plans:***<br>N/A<br><br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Increase driven by need to sustain, modernize and keep current with emerging requirements and technologies. New requirements, obsolescence and increased supply chain costs are contributing factors. | | | | | |
| ***Title:*** EO4 Development | 4.559 | 0.669 | 0.180 | 0.000 | 0.180 |
| ***Articles:*** | - | - | - | - | - |
| ***Description:*** Design, develop, integrate, and test a Fourth Generation Electro-Optics (EO4) test system to replace the legacy EO3 test system. EO4 systems will provide the capability to test and diagnose an array of electro-optic weapons systems on F/A-18, H-60, JSF, and other aircraft platforms to support visual imaging, target identification and tracking, range finding, night-vision, and other electro-optic weapon system capabilities.<br><br>***FY 2024 Plans:*** | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Continue and complete DT testing and finalize delivery of (5) EDM models in support of EO4 program development.<br>***FY 2025 Base Plans:***<br>Transition from Developmental Testing into Production phase to prepare for FRP Lot 1.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of EO4 due to transition from Development phase into Production phase in FY24 shifting from RDTE to APN appropriation. | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 12.452 | 7.463 | 8.902 | 0.000 | 8.902 |

**C. Other Program Funding Summary ($ in Millions)**

| Line Item | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • APN/0705: *Common Ground Equipment-CASS/ATE* | 120.295 | 117.689 | 119.804 | - | 119.804 | 124.416 | 137.181 | 128.343 | 130.643 | Continuing | Continuing |

**Remarks**

**D. Acquisition Strategy**

Formal test technology reviews with industry are conducted annually (cooperative Joint Services initiative) to define maturity of needed technologies. Further studies are conducted as needed. Procurement strategy is determined by market survey and cooperative opportunities.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>0852 / *Consolidated Auto Support System* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hdw Dev - Test Technology | C/CPFF | Various : Various | 7.867 | 2.304 | Dec 2022 | 1.229 | Dec 2023 | 1.500 | Dec 2024 | - | | 1.500 | Continuing | Continuing | Continuing |
| Primary Hdw Dev - EO3 | SS/CPFF | Northrop Grumman : Rolling Meadows, IL | 3.844 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 3.844 | 3.844 |
| Primary Hdw Dev - EO4 | C/CPIF | Lockheed Martin : Lockheed Martin | 22.037 | 4.197 | Feb 2023 | 0.531 | Feb 2024 | 0.000 | | - | | 0.000 | 13.884 | 40.649 | 40.649 |
| Prior Year Prod Dev no longer funded in the FYDP | Various | Various : Various | 132.305 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 132.305 | - |
| | | **Subtotal** | 166.053 | 6.501 | | 1.760 | | 1.500 | | - | | 1.500 | Continuing | Continuing | N/A |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Technology Support | WR | Various : Various | 7.385 | 1.598 | Dec 2022 | 1.916 | Dec 2023 | 2.662 | Dec 2024 | - | | 2.662 | Continuing | Continuing | Continuing |
| EO3 Support | WR | NAWC AD : Lakehurst, NJ | 0.777 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.777 | - |
| ATS Modernization | WR | Various : Various | 6.067 | 3.911 | Dec 2022 | 3.564 | Dec 2023 | 4.470 | Dec 2024 | - | | 4.470 | 0.000 | 18.012 | - |
| EO4 Support | WR | NAWC AD : Lakehurst, NJ | 4.859 | 0.362 | Dec 2022 | 0.138 | Dec 2023 | 0.180 | Dec 2024 | - | | 0.180 | 4.616 | 10.155 | - |
| Prior Year Support no longer funded in the FYDP | Various | Various : Various | 27.703 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 27.703 | - |
| | | **Subtotal** | 46.791 | 5.871 | | 5.618 | | 7.312 | | - | | 7.312 | Continuing | Continuing | N/A |

**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Tech Travel | WR | Various : Various | 0.493 | 0.080 | Nov 2022 | 0.085 | Nov 2023 | 0.090 | Nov 2024 | - | | 0.090 | Continuing | Continuing | Continuing |
| EO3 Travel | WR | Various : Various | 0.102 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.102 | - |
| EO4 Travel | WR | Various : Various | 0.084 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.084 | - |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |

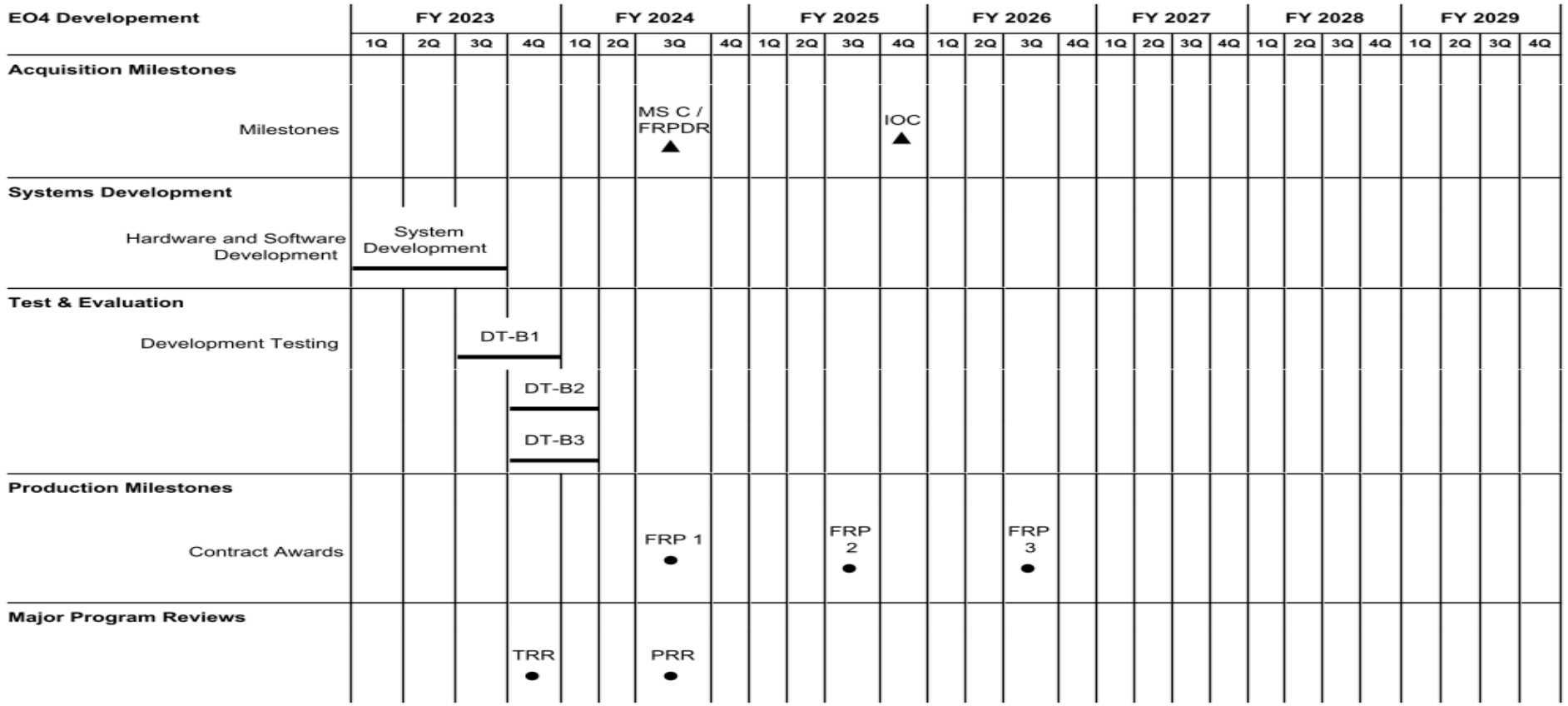
**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prior Year Mgmt no longer funded in the FYDP | Various | Various : Various | 2.659 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.659 | - |
| | | **Subtotal** | 3.338 | 0.080 | | 0.085 | | 0.090 | | - | | 0.090 | Continuing | Continuing | N/A |

| | Prior Years | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 216.182 | 12.452 | | 7.463 | | 8.902 | | - | | 8.902 | Continuing | Continuing | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |




*2025DON - 0205633N - 0852*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>0852 / *Consolidated Auto Support System* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***EO4 Developement*** | | | | |
| Acquisition Milestones: Milestones: Milestone C / FRPDR | 3 | 2024 | 3 | 2024 |
| Acquisition Milestones: Milestones: IOC | 4 | 2025 | 4 | 2025 |
| Systems Development: Hardware and Software Development: System Development | 1 | 2023 | 3 | 2023 |
| Test & Evaluation: Development Testing: Design Verification Testing: DT-B1 Phase 1 | 3 | 2023 | 4 | 2023 |
| Test & Evaluation: Development Testing: Environmental Testing: DT-B1 Phase 2 | 4 | 2023 | 1 | 2024 |
| Test & Evaluation: Development Testing: Government Testing: DT-B1 Phase 3 | 4 | 2023 | 1 | 2024 |
| Production Milestones: Contract Awards: FRP1-APN | 3 | 2024 | 3 | 2024 |
| Production Milestones: Contract Awards: FRP2-APN | 3 | 2025 | 3 | 2025 |
| Production Milestones: Contract Awards: FRP3-APN | 3 | 2026 | 3 | 2026 |
| Major Program Reviews: TRR | 4 | 2023 | 4 | 2023 |
| Major Program Reviews: PRR | 3 | 2024 | 3 | 2024 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* | |

| COST ($ in Millions) | Prior Years | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1041: *Aircraft Equipment Reliability/Maintainability Improvement Program (AERMIP)* | 74.408 | 6.477 | 5.455 | 4.956 | - | 4.956 | 4.857 | 4.267 | 4.039 | 4.126 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

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

Aircraft Equipment Reliability/Maintainability Improvement Program (AERMIP) is the only Navy program which provides Research, Development, Test & Evaluation engineering support specifically for in-service, out-of-production aircraft equipment. AERMIP increases readiness through reliability, maintainability, and safety improvements to existing systems and equipment installed in Naval aircraft. It also provides a transition vehicle to deploy Total Ownership Cost reduction initiatives through flight-test support and Fleet Test & Evaluation. It meets affordable readiness objectives by providing a cost-effective solution to obsolescence problems encountered when service lives are extended. AERMIP promotes commonality and standardization across aircraft platform lines and among the services through extension of application and use of non-developmental items. AERMIP also decreases life cycle costs through reduced operational and support costs. AERMIP facilitates the Operational, Safety and Improvement Program by applying proven low-risk solutions to current fleet problems. AERMIP also funds high-priority flight testing which is not associated with any acquisition or development program under the Flight Test General task.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| ***Title:*** Avionics and Wiring | 0.363 | 0.446 | 0.446 | 0.000 | 0.446 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Test and evaluate equipment for effectiveness of wiring diagnostics and prognostics. Address avionics related reliability/maintainability issues impacting multiple aircraft platforms while continuing to investigate high value return on investment initiatives. Qualify additional material or pieces of equipment and the procedures or processes required for implementation. | | | | | |
| ***FY 2025 Base Plans:***<br>Test and evaluate equipment for effectiveness of wiring diagnostics and prognostics. Address avionics related reliability/maintainability issues impacting multiple aircraft platforms while continuing to investigate high value | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| return on investment initiatives. Qualify additional material or pieces of equipment and the procedures or processes required for implementation.<br>***FY 2025 OCO Plans:***<br>N/A | | | | | |
| ***Title:*** Air Vehicle | 5.286 | 5.009 | 4.510 | 0.000 | 4.510 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Based on advancement in technology, test and qualify new materials or equipment and the procedures/process required for their implementation to improve operational reliability, while containing cost growth. Continue to test and qualify improved corrosion preventative compounds. Address subsystem related reliability/maintainability issues impacting multiple aircraft platforms while continuing to investigate high value return on investment initiatives. Maintain efforts to qualify improved methods of structural component repair.<br>***FY 2025 Base Plans:***<br>Based on advancement in technology, test and qualify new materials or equipment and the procedures/process required for their implementation to improve operational reliability, while containing cost growth. Continue to test and qualify improved corrosion preventative compounds. Address subsystem related reliability/maintainability issues impacting multiple aircraft platforms while continuing to investigate high value return on investment initiatives. Maintain efforts to qualify improved methods of structural component repair.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $0.499 from FY2024 to FY2025 due completion of a corrosion project. | | | | | |
| ***Title:*** Systems Engineering Revitalization | 0.828 | 0.000 | 0.000 | 0.000 | 0.000 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>N/A<br>***FY 2025 Base Plans:*** | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| N/A<br>***FY 2025 OCO Plans:***<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 6.477 | 5.455 | 4.956 | 0.000 | 4.956 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

This is a non-ACAT program. Procurement strategy is determined by market survey and cooperative opportunities.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sys Eng - Avionics/Wiring | WR | NAWCAD : Patuxent River, MD | 10.303 | 0.203 | Oct 2022 | 0.286 | Oct 2023 | 0.286 | Oct 2024 | - | | 0.286 | Continuing | Continuing | Continuing |
| Sys Eng - Avionics/Wiring | C/FFP | Various : Various | 3.050 | 0.050 | Jan 2023 | 0.050 | Jan 2024 | 0.050 | Jan 2025 | - | | 0.050 | 0.000 | 3.200 | 3.200 |
| Sys Eng - Avionics/Wiring | WR | FRC-E : Cherry Point, NC | 0.170 | 0.020 | Nov 2022 | 0.020 | Nov 2023 | 0.020 | Nov 2024 | - | | 0.020 | Continuing | Continuing | Continuing |
| Sys Eng - Avionics/Wiring | WR | FRC-SE : Jacksonville, FL | 0.060 | 0.020 | Nov 2022 | 0.020 | Nov 2023 | 0.020 | Nov 2024 | - | | 0.020 | Continuing | Continuing | Continuing |
| Sys Eng - Avionics/Wiring | WR | FRC-SW : San Diego, CA | 0.065 | 0.020 | Nov 2022 | 0.020 | Nov 2023 | 0.020 | Nov 2024 | - | | 0.020 | Continuing | Continuing | Continuing |
| Sys Eng - Air Vehicle | WR | NAWCAD : Patuxent River, MD | 15.917 | 1.855 | Oct 2022 | 2.000 | Oct 2023 | 1.989 | Oct 2024 | - | | 1.989 | Continuing | Continuing | Continuing |
| Sys Eng - Air Vehicle | WR | FRC-SW : San Diego, CA | 3.706 | 0.532 | Nov 2022 | 0.500 | Nov 2023 | 0.472 | Nov 2024 | - | | 0.472 | Continuing | Continuing | Continuing |
| Sys Eng - Air Vehicle | WR | FRC-E : Cherry Point, NC | 2.694 | 0.373 | Nov 2022 | 0.373 | Nov 2023 | 0.371 | Nov 2024 | - | | 0.371 | Continuing | Continuing | Continuing |
| Sys Eng - Air Vehicle | WR | FRC-SE : Jacksonville, FL | 1.828 | 0.373 | Nov 2022 | 0.373 | Nov 2023 | 0.371 | Nov 2024 | - | | 0.371 | Continuing | Continuing | Continuing |
| Sys Eng - Air Vehicle | C/FFP | Various : Various | 3.702 | 1.863 | Dec 2022 | 1.433 | Jan 2024 | 1.000 | Jan 2025 | - | | 1.000 | 0.000 | 7.998 | 7.998 |
| Sys Eng - SE Revitalization | WR | NAWCAD : Patuxent River, MD | 1.053 | 0.130 | Nov 2022 | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| Sys Eng - SE Revitalization | C/FFP | Engility Corp. : Chantilly, VA | 6.315 | 0.313 | Feb 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 6.628 | 6.628 |
| Sys Eng - SE Revitalization | C/CPFF | Stevens Inst of Technology : Hoboken, NJ | 4.993 | 0.385 | Feb 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 5.378 | 5.378 |
| Prior Year Sys Eng NAE/ Prod Dev no longer funded in the FYDP | Various | Various : Various | 2.813 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.813 | - |
| | | **Subtotal** | 56.669 | 6.137 | | 5.075 | | 4.599 | | - | | 4.599 | Continuing | Continuing | N/A |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Remarks**

All prior year lines have been consolidated

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prior Year Support cost no longer funded in the FYDP | Various | Various : Various | 12.480 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 12.480 | - |
| | | **Subtotal** | 12.480 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 12.480 | N/A |

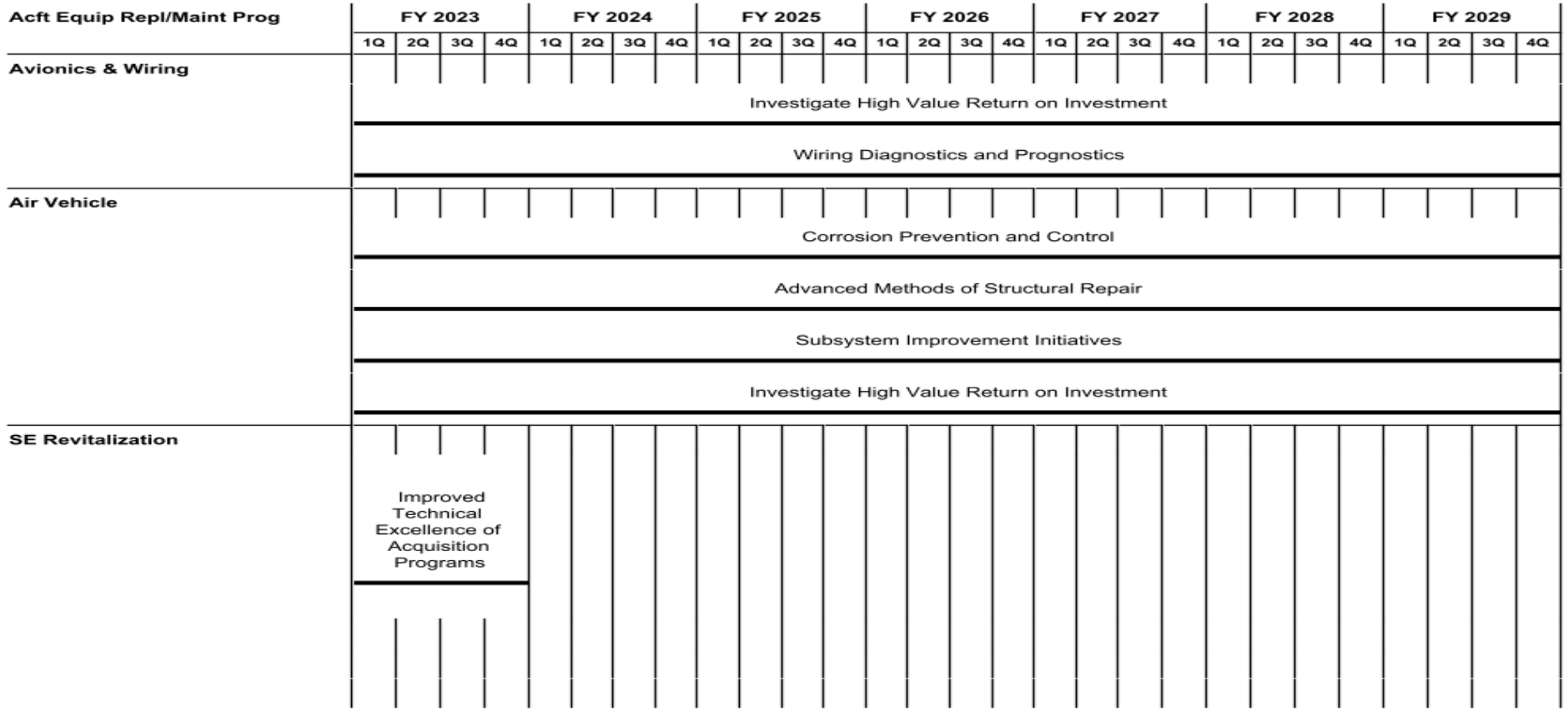
**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Management Support | WR | NAWCAD : Patuxent River, MD | 3.288 | 0.340 | Oct 2022 | 0.380 | Oct 2023 | 0.357 | Oct 2024 | - | | 0.357 | Continuing | Continuing | Continuing |
| Prior Year Mgmt cost no longer funded in the FYDP | Various | Various : Various | 1.971 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.971 | - |
| | | **Subtotal** | 5.259 | 0.340 | | 0.380 | | 0.357 | | - | | 0.357 | Continuing | Continuing | N/A |

| | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 74.408 | 6.477 | | 5.455 | | 4.956 | | - | | 4.956 | Continuing | Continuing | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* |




*2025DON - 0205633N - 1041*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1041 / *Aircraft Equipment Reliability/ Maintainability Improvement Program (AERMIP)* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Acft Equip Repl/Maint Prog*** | | | | |
| Avionics & Wiring: Investigate High Value Return on Avionics & Wiring Investment | 1 | 2023 | 4 | 2029 |
| Avionics & Wiring: Wiring Diagnostics and Prognostics | 1 | 2023 | 4 | 2029 |
| Air Vehicle: Corrosion Prevention and Control | 1 | 2023 | 4 | 2029 |
| Air Vehicle: Advanced Methods of Structural Repair | 1 | 2023 | 4 | 2029 |
| Air Vehicle: Subsystem Improvement Initiatives | 1 | 2023 | 4 | 2029 |
| Air Vehicle: Investigate High Value Return on Air Vehicle Investment | 1 | 2023 | 4 | 2029 |
| SE Revitalization: Improved Technical Excellence of Acquisition Programs | 1 | 2023 | 4 | 2023 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | | | | | | | | | Date: March 2024 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | | | | | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | | | | Project (Number/Name)<br>1355 / *Propulsion and Power Component Improvement Program* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2023** | **FY 2024** | **FY 2025 Base** | **FY 2025 OCO** | **FY 2025 Total** | **FY 2026** | **FY 2027** | **FY 2028** | **FY 2029** | **Cost To Complete** | **Total Cost** |
| 1355: *Propulsion and Power Component Improvement Program* | 1,638.411 | 109.823 | 114.959 | 107.757 | - | 107.757 | 108.345 | 109.209 | 112.271 | 114.565 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

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

The Propulsion and Power (P&P) Component Improvement Program (CIP) provides the only source of critical design and development engineering support to resolve safety, reliability and maintainability deficiencies of in-service Navy and Marine Corps aircraft propulsion systems. The highest priority issues P&P CIP addresses concern safety-of-flight deficiencies, which account for approximately 80% of P&P CIP efforts. The program also corrects service-revealed deficiencies, improves Operational Readiness and Reliability and Maintainability, and reduces platform Life Cycle Cost. Budgets are allocated across platform-specific teams and multi-platform product support teams based upon long term strategies to achieve safety and affordable readiness goals; the R-3 exhibit details annual portions of those long-term strategies. P&P CIP tasks have reduced the rate of in-flight aborts, safety incidents, non-mission capable rates, scheduled and unscheduled engine removals, maintenance work hours, and overall cost of ownership. This is accomplished through the maintenance and validation of specification performance, testing to qualify engineering changes, verifying life limits, and improving the inherent reliability of the propulsion and power systems as an integral part of Reliability Centered Maintenance initiatives. Historically, the missions, tactics, and environmental exposure of military aircraft systems change to meet new threats or operational demands, and often result in unforeseen problems, which if not corrected, can cause critical safety/readiness degradation, such as those experienced during OPERATIONS DESERT SHIELD/DESERT STORM, ENDURING FREEDOM, and IRAQI FREEDOM due to sand erosion. In addition, new problems arise through actual fleet deployment and usage of the aircraft. System development programs, while geared to resolve as many problems as possible before deployment, cannot duplicate actual operations or account for the vast array of environmental and usage variables, particularly when aircraft missions vary from those that the aircraft was designed to perform. Therefore, it has been found that P&P CIP can provide an immediate engineering response to these flight-critical problems and accelerated engine testing can avoid potential problems. P&P CIP starts after development and Navy acceptance of the first production article and addresses usage and life problems not covered by warranties. P&P CIP addresses engines, transmissions, propellers, starters, auxiliary power units, electrical generating systems, aircraft wiring, and fuel and lubricant systems. These efforts continue over the system's life, gradually decreasing to a minimum level sufficient to maintain the reliability, and decrease the operating costs, of older inventory. P&P CIP is a highly leveraged and cooperative tri-service program with Foreign Military Sales participation.

| **B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)** | **FY 2023** | **FY 2024** | **FY 2025 Base** | **FY 2025 OCO** | **FY 2025 Total** |
|---|---|---|---|---|---|
| ***Title:*** P3, E2, C2, C130 (T56) | 4.936 | 6.250 | 6.250 | 0.000 | 6.250 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Continue projects on T56 Series III engine on the analysis, design and qualification of improvements to address Service Revealed Deficiencies and preform repair development on system components. For the T56 Series | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| IV engine perform analysis, design and qualification work related to address Service Revealed Deficiencies and safety, readiness and cost drivers on system components and execute projects on engine performance standardization, hot section reliability, compressor blade durability and analytical condition inspections of Fleet hardware. Develop, design and test improvements to system components including the compressor, combustor, turbine, controls and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems and auxiliary power, and electrical power systems.<br>***FY 2025 Base Plans:***<br>Continue projects on T56 Series III engine on the analysis, design and qualification of improvements to address Service Revealed Deficiencies and preform repair development on system components. For the T56 Series IV engine perform analysis, design and qualification work related to address Service Revealed Deficiencies and safety, readiness and cost drivers on system components and execute projects on engine performance standardization, hot section reliability, compressor blade durability and analytical condition inspections of Fleet hardware. Develop, design and test improvements to system components including the compressor, combustor, turbine, controls and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems and auxiliary power, and electrical power systems.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| ***Title:*** E2/C2/C130/P3 (Props) | 3.800 | 3.800 | 3.800 | 0.000 | 3.800 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on system components for the 54H60, R391 and NP2000 propeller systems. Develop, design and test 54H60, R391 and NP2000 Propeller system improvements to the control, pitch actuation and hydraulic systems, blades, pumps, housings, seals and static structure to improve safety, reliability, maintainability, affordability, durability and Readiness. Execute efforts on repair and reliability engineering, universal closed loop bench testing, bond joint delamination and perform analysis, design and testing on components to improve Readiness.<br>***FY 2025 Base Plans:*** | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on system components for the 54H60, R391 and NP2000 propeller systems. Develop, design and test 54H60, R391 and NP2000 Propeller system improvements to the control, pitch actuation and hydraulic systems, blades, pumps, housings, seals and static structure to improve safety, reliability, maintainability, affordability, durability and Readiness. Execute efforts on repair and reliability engineering, universal closed loop bench testing, bond joint delamination and perform analysis, design and testing on components to improve Readiness.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| ***Title:*** SH-60B/F, HH-60H, MH-60R/S (T700) | 7.400 | 8.200 | 7.400 | 0.000 | 7.400 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T700 propulsion and power system components including the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems, auxiliary power and electrical power systems, and main and tail rotor drives systems. Perform analysis, design and testing on projects to improve the compression system and static structures tolerance to sand ingestion and engine build optimization. Perform analysis, modeling design and testing on propulsion system to demonstrate damage tolerance and reparability. Perform engine and component testing to develop and qualify design improvements.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T700 propulsion and power system components including the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems, auxiliary power and electrical power systems, and main and tail rotor drives systems. Perform analysis, design and testing on projects to improve the compression system and static structures tolerance to sand ingestion and engine build optimization. Perform analysis, modeling design and | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| testing on propulsion system to demonstrate damage tolerance and reparability. Perform engine and component testing to develop and qualify design improvements.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $0.800M from FY2024 to FY2025 due to decrease in completion of instrumented engine test. | | | | | |
| ***Title:*** H-1 (T400/T700)<br>***Articles:***<br>***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T700 propulsion and power system components including the compressor, combustor, turbines, controls, diagnostics, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power, electrical power systems and main and tail rotor drives systems. Continue program to demonstrate drive system corrosion prevention coating development and demonstration.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T700 propulsion and power system components including the compressor, combustor, turbines, controls, diagnostics, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power, electrical power systems and main and tail rotor drives systems. Continue program to demonstrate drive system corrosion prevention coating development and demonstration.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | 0.600<br>- | 0.600<br>- | 0.600<br>- | 0.000<br>- | 0.600<br>- |
| ***Title:*** AV-8B (F402)<br>***Articles:***<br>***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the F402 propulsion and power system components including the fan, | 3.651<br>- | 3.651<br>- | 3.651<br>- | 0.000<br>- | 3.651<br>- |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems, auxiliary power, electrical power and FOD detection systems. Continue working on risk management plan of supplying critical parts and refinement of life limit determinations and identification of critical parts constraints to improve safety, reliability, maintainability, affordability, durability and Readiness.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the F402 propulsion and power system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, engine fuel and lubrication systems, auxiliary power, electrical power and FOD detection systems. Continue working on risk management plan of supplying critical parts and refinement of life limit determinations and identification of critical parts constraints to improve safety, reliability, maintainability, affordability, durability and Readiness.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| ***Title:*** H-53/H-46/H-3 (T58/T64) | 3.000 | 4.050 | 3.022 | 0.000 | 3.022 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T64 propulsion and power system components including the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems and air vehicle drive system components to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing to develop inspection and repair criteria, optimized depot-level engine build specification procedures, and data reduction program implementation. Update engine mission usage and hardware life management plans.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the T64 propulsion and power system components including the compressor, | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems and air vehicle drive system components to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing to develop inspection and repair criteria, optimized depot-level engine build specification procedures, and data reduction program implementation. Update engine mission usage and hardware life management plans.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $1.028M from FY2024 to FY2025 due to engine configuration design freeze. | | | | | |
| ***Title:*** F-18 C/D/E/F (F414/F404) | 19.798 | 19.798 | 19.798 | 0.000 | 19.798 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on propulsion and power system components for the F414 and F404 turbofan engines including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems, augmenter and exhaust systems to improve reliability, maintainability, affordability, durability. Execute design efforts to improve engine hot section durability. Execute engine and component test programs to demonstrate design improvements.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on propulsion and power system components for the F414 and F404 turbofan engines including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems, augmenter and exhaust systems to improve reliability, maintainability, affordability, durability. Execute design efforts to improve engine hot section durability. Execute engine and component test programs to demonstrate design improvements.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:*** | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| N/A | | | | | |
| ***Title:*** T-45 (F405) | 2.600 | 3.200 | 2.600 | 0.000 | 2.600 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies, safety, readiness and cost drivers on the F405 propulsion and power system components including fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing on projects to update rotating engine part lives and mitigation approaches to address propulsion and power system component obsolescence issues and engine performance degradation. | | | | | |
| ***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies, safety, readiness and cost drivers on the F405 propulsion and power system components including fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing on projects to update rotating engine part lives and mitigation approaches to address propulsion and power system component obsolescence issues and engine performance degradation. | | | | | |
| ***FY 2025 OCO Plans:***<br>N/A | | | | | |
| ***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $0.600M from FY2024 to FY2025 due to decrease in completion of engine sand ingestion test program and decrease in reduced OEM engineering design activity | | | | | |
| ***Title:*** V-22 Propulsion | 4.880 | 6.800 | 5.950 | 0.000 | 5.950 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the AE1107C propulsion and power system components the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| and lubrication systems, auxiliary power and electrical power systems and prop rotor drive systems to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing on projects to mitigate rapid power loss and engine surge, and improve engine durability and operability, perform testing and rig testing and analysis to update the engine stability audit to improve engine flight safety.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost drivers on the AE1107C propulsion and power system components the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems and prop rotor drive systems to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform analysis, design and testing on projects to mitigate rapid power loss and engine surge, and improve engine durability and operability, perform testing and rig testing and analysis to update the engine stability audit to improve engine flight safety.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $0.850M from FY2024 to FY2025 due to decrease in completion of engine sand ingestion test program and decrease of OEM engine operability test program | | | | | |
| ***Title:*** Adversary (J85) (F100) | 2.000 | 2.350 | 2.350 | 0.000 | 2.350 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and Readiness and cost drivers on the J85 and F100 propulsion and power system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems, augmenter and exhaust systems to improve safety, reliability, maintainability, affordability, durability. Continue joint projects with the USAF to perform analysis, design and testing on projects to validate the life assessment of J85 critical rotating hardware, address parts obsolescence issues, evaluate hardware inspection data, and perform stress modeling to update life limits.<br>***FY 2025 Base Plans:*** | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and Readiness and cost drivers on the J85 and F100 propulsion and power system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems, augmenter and exhaust systems to improve safety, reliability, maintainability, affordability, durability. Continue joint projects with the USAF to perform analysis, design and testing on projects to validate the life assessment of J85 critical rotating hardware, address parts obsolescence issues, evaluate hardware inspection data, and perform stress modeling to update life limits.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| ***Title:*** Joint Strike Fighter (F135 Engine)<br>***Articles:***<br>***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on propulsion and power system components of the F135 engine and STOVL lift system in accordance with F-35 Program Instruction 1540.05 F135 CIP Management Guide for the F135 Propulsion System Component Improvement Program. Develop, design and test improvements to system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems, augmenter, exhaust and STOVL Lift system to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform engine testing and STOVL propulsion system testing at government and contractor test facilities.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on propulsion and power system components of the F135 engine and STOVL lift system in accordance with F-35 Program Instruction 1540.05 F135 CIP Management Guide for the F135 Propulsion System Component Improvement Program. Develop, design and test improvements to system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power | 35.535<br>- | 37.460<br>- | 35.083<br>- | 0.000<br>- | 35.083<br>- |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| systems, augmenter, exhaust and STOVL Lift system to improve safety, reliability, maintainability, affordability, durability and Readiness. Perform engine testing and STOVL propulsion system testing at government and contractor test facilities.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $2.377M from FY2024 to FY2025 due to decrease in completion of Fan Rotor 1 Spint Test Program. | | | | | |
| ***Title:*** P-8A (CFM56 Engine)<br>***Articles:***<br>***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on propulsion and power system components of the CFM56 system including the fan, compressor, combustors, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, and durability.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on propulsion and power system components of the CFM56 system including the fan, compressor, combustors, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, and durability.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | 1.300<br>- | 0.650<br>- | 0.650<br>- | 0.000<br>- | 0.650<br>- |
| ***Title:*** Multi-Platform Product Support Teams<br>***Articles:***<br>***FY 2024 Plans:*** | 4.723<br>- | 4.723<br>- | 4.723<br>- | 0.000<br>- | 4.723<br>- |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Continue projects to provide support to multiple platforms to analyze fleet component removal driver and reliability metrics to focus CIP investments to maximize Readiness and return on investment, improve performance analysis, structural integrity modeling and simulation tools, and developmental test and evaluation facilities and procedures for propulsion and power system including engines, drive systems, fuels and lubricants, auxiliary power and electrical power systems. Includes funding for Government Furnished Fuel for research and development test and evaluation programs to evaluate and qualify component design improvements to improve safety, readiness, reliability, maintainability and durability.<br>***FY 2025 Base Plans:***<br>Continue projects to provide support to multiple platforms to analyze fleet component removal driver and reliability metrics to focus CIP investments to maximize Readiness and return on investment, improve performance analysis, structural integrity modeling and simulation tools, and developmental test and evaluation facilities and procedures for propulsion and power system including engines, drive systems, fuels and lubricants, auxiliary power and electrical power systems. Includes funding for Government Furnished Fuel for research and development test and evaluation programs to evaluate and qualify component design improvements to improve safety, readiness, reliability, maintainability and durability.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| ***Title:*** H-53K Propulsion (T408) | 13.220 | 10.547 | 9.000 | 0.000 | 9.000 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address identified deficiencies and safety readiness and cost and reliability drivers on the T408 propulsion and power system components including the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems and main and tail rotor drive systems to improve safety, reliability, maintainability, affordability, durability. Perform analysis and testing to develop improvements to compression system stability and operability and improve sand ingestion tolerance. Perform uninstalled engine environmental endurance testing to demonstrate durability improvements.<br>***FY 2025 Base Plans:*** | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| Perform engineering analysis, design and test efforts to address identified deficiencies and safety readiness and cost and reliability drivers on the T408 propulsion and power system components including the compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems and main and tail rotor drive systems to improve safety, reliability, maintainability, affordability, durability. Perform analysis and testing to develop improvements to compression system stability and operability and improve sand ingestion tolerance. Perform uninstalled engine environmental endurance testing to demonstrate durability improvements.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Decrease of $1.547M from FY2024 to FY2025 due to completion of uninstalled engine endurance test program. | | | | | |
| ***Title:*** MQ-4C (AE3007 Engine) | 1.000 | 1.500 | 1.500 | 0.000 | 1.500 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on the AE3007 propulsion and power system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, and durability.<br>***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on the AE3007 propulsion and power system components including the fan, compressor, combustor, turbines, control and diagnostic systems, static structures, gearboxes, bearings, seals, drives, fuel and lubrication systems, auxiliary power and electrical power systems to improve safety, reliability, maintainability, affordability, and durability.<br>***FY 2025 OCO Plans:***<br>N/A<br>***FY 2024 to FY 2025 Increase/Decrease Statement:*** | | | | | |

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| N/A | | | | | |
| ***Title:*** UAV Programs (Various) | 1.380 | 1.380 | 1.380 | 0.000 | 1.380 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on the propulsion and power systems for small and medium size Unmanned Air Vehicles (UAVs) including the RQ-21 Small Tactical Unmanned Aerial System (STUAS) and the MQ-8B and MQ-8C Fire Scout variants. Develop, design and test improvements to system components including the engine components, control and diagnostic systems, static structures, bearings, seals, drives, fuel and lubrication systems, ignition and electrical power systems, exhaust system and the propeller to improve safety, reliability, maintainability, affordability, and durability. | | | | | |
| ***FY 2025 Base Plans:***<br>Perform engineering analysis, design and test efforts to address Service Revealed Deficiencies and safety, readiness and cost and reliability drivers on the propulsion and power systems for small and medium size Unmanned Air Vehicles (UAVs) including the RQ-21 Small Tactical Unmanned Aerial System (STUAS) and the MQ-8B and MQ-8C Fire Scout variants. Develop, design and test improvements to system components including the engine components, control and diagnostic systems, static structures, bearings, seals, drives, fuel and lubrication systems, ignition and electrical power systems, exhaust system and the propeller to improve safety, reliability, maintainability, affordability, and durability. | | | | | |
| ***FY 2025 OCO Plans:***<br>N/A | | | | | |
| ***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 109.823 | 114.959 | 107.757 | 0.000 | 107.757 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**Remarks**

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|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

**D. Acquisition Strategy**

This is a NON-ACAT program. Procurement strategy is determined by market survey and cooperative opportunities.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sys Eng T56 Engine Program | WR | NAWCAD : Patuxent River, MD | 60.820 | 2.706 | Oct 2022 | 2.750 | Oct 2023 | 2.750 | Oct 2024 | - | | 2.750 | Continuing | Continuing | Continuing |
| Sys Eng T56 Engine Program | SS/CPFF | Rolls Royce : Indianapolis, IN | 79.341 | 1.800 | Jan 2023 | 3.050 | Jan 2024 | 3.050 | Oct 2024 | - | | 3.050 | 0.000 | 87.241 | 87.241 |
| Sys Eng T56 Engine Program | WR | FRC-E : Cherry Point, NC | 4.975 | 0.270 | Oct 2022 | 0.270 | Oct 2023 | 0.270 | Oct 2024 | - | | 0.270 | Continuing | Continuing | Continuing |
| Sys Eng T56 Engine Program | WR | FRC-SE : Jacksonville, FL | 1.276 | 0.080 | Oct 2022 | 0.090 | Oct 2023 | 0.090 | Oct 2024 | - | | 0.090 | Continuing | Continuing | Continuing |
| Sys Eng T56 Engine Program | WR | FRC-SW : North Island, CA | 0.558 | 0.080 | Oct 2022 | 0.090 | Oct 2023 | 0.090 | Oct 2024 | - | | 0.090 | Continuing | Continuing | Continuing |
| Sys Eng Props Program | SS/CPFF | Hamilton Sundstrand : Windsor Locks, CT | 43.433 | 2.800 | Jan 2023 | 2.800 | Jan 2024 | 2.800 | Jan 2025 | - | | 2.800 | 0.000 | 51.833 | 51.833 |
| Sys Eng Props Program | SS/CPFF | Dowty Propellers : Gloucester UK | 1.000 | 1.000 | Jan 2023 | 1.000 | Jan 2024 | 1.000 | Jan 2025 | - | | 1.000 | 0.000 | 4.000 | 4.000 |
| Sys Eng T700 Engine Program | WR | NAWCAD : Patuxent River, MD | 31.632 | 3.800 | Oct 2022 | 4.400 | Oct 2023 | 3.800 | Oct 2024 | - | | 3.800 | Continuing | Continuing | Continuing |
| Sys Eng T700 Engine Program | SS/CPFF | General Electric : Lynn, MA | 50.921 | 3.600 | Jan 2023 | 3.800 | Jan 2024 | 3.600 | Jan 2025 | - | | 3.600 | 0.000 | 61.921 | 61.921 |
| Sys Eng F402 Engine Program | WR | NAWCAD : Patuxent River, MD | 29.807 | 1.800 | Oct 2022 | 1.800 | Oct 2023 | 1.800 | Oct 2024 | - | | 1.800 | Continuing | Continuing | Continuing |
| Sys Eng F402 Engine Program | WR | FRC-E : Cherry Point, NC | 1.690 | 0.152 | Oct 2022 | 0.152 | Oct 2023 | 0.152 | Oct 2024 | - | | 0.152 | Continuing | Continuing | Continuing |
| Sys Eng F402 Engine Program | SS/CPFF | Rolls Royce : Bristol, England, UK | 85.960 | 1.700 | Jan 2023 | 1.700 | Jan 2024 | 1.700 | Jan 2025 | - | | 1.700 | 0.000 | 91.060 | 91.060 |
| Sys Eng T58/T64 Engine Program | WR | NAWCAD : Patuxent River, MD | 48.080 | 2.000 | Oct 2022 | 2.200 | Oct 2023 | 1.172 | Oct 2024 | - | | 1.172 | Continuing | Continuing | Continuing |
| Sys Eng T58/T64 Engine Program | SS/CPFF | General Electric : Lynn, MA | 96.900 | 1.000 | Jan 2023 | 1.850 | Jan 2024 | 1.850 | Jan 2025 | - | | 1.850 | 0.000 | 101.600 | 101.600 |
| Sys Eng F414/F404 Engine Program | WR | NAWCAD : Patuxent River, MD | 69.704 | 5.110 | Oct 2022 | 5.000 | Oct 2023 | 5.000 | Oct 2024 | - | | 5.000 | Continuing | Continuing | Continuing |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sys Eng F414/F404 Engine Program | SS/CPFF | General Electric : Lynn, MA | 231.488 | 14.188 | Jan 2023 | 14.548 | Jan 2024 | 14.548 | Jan 2025 | - | | 14.548 | 0.000 | 274.772 | 274.772 |
| Sys Eng F414/F404 Engine Program | WR | FRC-SE : Jacksonville, FL | 2.223 | 0.500 | Nov 2022 | 0.250 | Nov 2023 | 0.250 | Nov 2024 | - | | 0.250 | Continuing | Continuing | Continuing |
| Sys Eng F405 Engine Program | WR | NAWCAD : Patuxent River, MD | 19.135 | 1.500 | Oct 2022 | 2.100 | Oct 2023 | 1.500 | Oct 2024 | - | | 1.500 | Continuing | Continuing | Continuing |
| Sys Eng F405 Engine Program | SS/CPFF | Rolls Royce : Bristol, England, UK | 42.229 | 1.100 | Jan 2023 | 1.100 | Jan 2024 | 1.100 | Jan 2025 | - | | 1.100 | 0.000 | 45.529 | 45.529 |
| Sys Eng V-22 Propulsion Program | WR | NAWCAD : Patuxent River, MD | 9.738 | 1.620 | Oct 2022 | 2.000 | Oct 2023 | 2.000 | Oct 2024 | - | | 2.000 | Continuing | Continuing | Continuing |
| Sys Eng V-22 Propulsion Program | SS/FFP | Bell- Boeing : Ft. Worth, TX | 17.144 | 1.630 | Jan 2023 | 2.000 | Jan 2024 | 2.000 | Jan 2025 | - | | 2.000 | 0.000 | 22.774 | 22.774 |
| Sys Eng V-22 Propulsion Program | SS/CPFF | Rolls Royce : Indianapolis, IN | 13.485 | 1.630 | Jan 2023 | 2.800 | Jan 2024 | 1.950 | Jan 2025 | - | | 1.950 | 0.000 | 19.865 | 19.865 |
| Sys Eng Adversary J85 Engine Program | WR | FRC-SE : Jacksonville, FL | 0.483 | 0.100 | Nov 2022 | 0.100 | Nov 2023 | 0.100 | Nov 2024 | - | | 0.100 | Continuing | Continuing | Continuing |
| Sys Eng Adversary J85 Engine Program | WR | NAWCAD : Patuxent River, MD | 11.260 | 1.250 | Nov 2022 | 1.600 | Nov 2023 | 1.600 | Nov 2024 | - | | 1.600 | Continuing | Continuing | Continuing |
| Sys Eng Adversary J85 Engine Program | SS/CPFF | General Electric : Lynn, MA | 6.196 | 0.650 | Jan 2023 | 0.650 | Jan 2024 | 0.650 | Jan 2025 | - | | 0.650 | 0.000 | 8.146 | 8.146 |
| Sys Eng JSF Engine Program | WR | NAWCAD : Patuxent River, MD | 13.360 | 1.400 | Oct 2022 | 1.400 | Oct 2023 | 1.400 | Oct 2024 | - | | 1.400 | Continuing | Continuing | Continuing |
| Sys Eng JSF Engine Program | SS/FFP | UTC Pratt & Whitney : East Hartford, CT | 193.536 | 34.135 | Jan 2023 | 36.060 | Jan 2024 | 33.683 | Jan 2025 | - | | 33.683 | 0.000 | 297.414 | 297.414 |
| Sys Eng P-8A Engine Program | WR | NAWCAD : Patuxent River, MD | 4.800 | 1.300 | Oct 2022 | 0.650 | Oct 2023 | 0.650 | Oct 2024 | - | | 0.650 | Continuing | Continuing | Continuing |
| Sys Eng Lab Fld Activity-1.0 or more | WR | NAWCAD : Patuxent River, MD | 236.243 | 3.827 | Oct 2022 | 3.827 | Oct 2023 | 3.827 | Oct 2024 | - | | 3.827 | Continuing | Continuing | Continuing |
| Sys Eng Other In-House Spt | Various | Various : Various | 22.247 | 0.500 | Nov 2022 | 0.500 | Nov 2023 | 0.500 | Nov 2024 | - | | 0.500 | Continuing | Continuing | Continuing |
| GFE* | Reqn | DES/DLA : Various | 19.614 | 1.000 | Jan 2023 | 1.000 | Jan 2024 | 1.000 | Jan 2025 | - | | 1.000 | Continuing | Continuing | Continuing |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sys Eng H-53K Propulsion | WR | NAWCAD : Patuxent River, MD | 7.550 | 2.000 | Oct 2022 | 3.000 | Oct 2023 | 3.000 | Oct 2024 | - | | 3.000 | Continuing | Continuing | Continuing |
| Sys Eng H-53K Propulsion | SS/CPFF | General Electric : Lynn, MA | 26.000 | 11.220 | Jan 2023 | 7.547 | Jan 2024 | 6.000 | Jan 2025 | - | | 6.000 | 0.000 | 50.767 | 50.767 |
| MQ-4C | WR | NAWCAD : Patuxent River, MD | 1.400 | 0.500 | Oct 2022 | 0.500 | Oct 2023 | 0.500 | Oct 2024 | - | | 0.500 | Continuing | Continuing | Continuing |
| MQ-4C | SS/CPFF | Rolls Royce : Indianapolis, IN | 2.500 | 0.500 | Mar 2023 | 1.000 | Jan 2024 | 1.000 | Jan 2025 | - | | 1.000 | 0.000 | 5.000 | 5.000 |
| Sys Eng UAV Engine Program | SS/FFP | Bell-Boeing : Bingen, WA | 1.400 | 0.500 | Mar 2023 | 0.500 | Jan 2024 | 0.500 | Jan 2025 | - | | 0.500 | 0.000 | 2.900 | 2.900 |
| Sys Eng UAV Engine Program | WR | NAWCAD : Patuxent River, MD | 0.850 | 0.300 | Oct 2022 | 0.300 | Oct 2023 | 0.300 | Oct 2024 | - | | 0.300 | Continuing | Continuing | Continuing |
| Prior Year/Not Funded FYDP | Various | Various : Various | 131.162 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 131.162 | - |
| | | **Subtotal** | 1,620.140 | 109.248 | | 114.384 | | 107.182 | | - | | 107.182 | Continuing | Continuing | N/A |

**Remarks**

GFE includes expected cost of fuel necessary to support engine development and qualification testing.
Total may be off due to rounding.
All prior year lines have been consolidated.

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Developmental Test & Evaluation (DT&E) | Various | Various : Various | 8.700 | 0.100 | Oct 2022 | 0.100 | Oct 2023 | 0.100 | Oct 2024 | - | | 0.100 | Continuing | Continuing | Continuing |
| Developmental Test & Evaluation (DT&E) | WR | NSWC : Crane, IN | 0.860 | 0.100 | Oct 2022 | 0.100 | Oct 2023 | 0.100 | Oct 2024 | - | | 0.100 | Continuing | Continuing | Continuing |
| Prior Year/Not Funded FYDP | Various | Various : Various | 1.278 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.278 | - |
| | | **Subtotal** | 10.838 | 0.200 | | 0.200 | | 0.200 | | - | | 0.200 | Continuing | Continuing | N/A |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>1355 / *Propulsion and Power Component Improvement Program* | |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Developmental Test & Evaluation (DT&E) | Various | Various : Various | 3.942 | 0.200 | Oct 2022 | 0.200 | Oct 2023 | 0.200 | Oct 2024 | - | | 0.200 | Continuing | Continuing | Continuing |
| Developmental Test & Evaluation (DT&E) | WR | NSWC : Crane, IN | 0.948 | 0.100 | Oct 2022 | 0.100 | Oct 2023 | 0.100 | Oct 2024 | - | | 0.100 | Continuing | Continuing | Continuing |
| | | **Subtotal** | 4.890 | 0.300 | | 0.300 | | 0.300 | | - | | 0.300 | Continuing | Continuing | N/A |

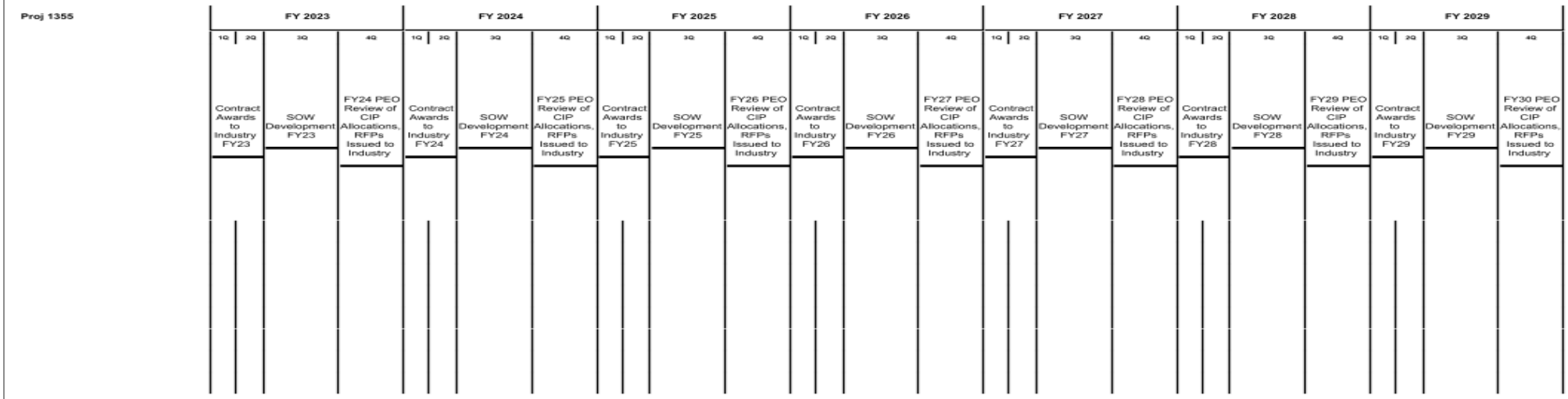
**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Travel | Various | NAVAIR : Patuxent River, MD | 1.096 | 0.075 | Oct 2022 | 0.075 | Oct 2023 | 0.075 | Oct 2024 | - | | 0.075 | Continuing | Continuing | Continuing |
| Prior Year/Not Funded FYDP | Various | Various : Various | 1.447 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.447 | - |
| | | **Subtotal** | 2.543 | 0.075 | | 0.075 | | 0.075 | | - | | 0.075 | Continuing | Continuing | N/A |

| | Prior Years | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 1,638.411 | 109.823 | | 114.959 | | 107.757 | | - | | 107.757 | Continuing | Continuing | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |



| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1355 / *Propulsion and Power Component Improvement Program* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj 1355*** | | | | |
| FY23 Contract Awards to Industry &Technical Reviews by Platform | 1 | 2023 | 2 | 2023 |
| SOW Development FY23 | 3 | 2023 | 3 | 2023 |
| FY24 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2023 | 4 | 2023 |
| FY24 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2024 | 2 | 2024 |
| SOW Development FY24 | 3 | 2024 | 3 | 2024 |
| FY25 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2024 | 4 | 2024 |
| FY25 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2025 | 2 | 2025 |
| SOW Development FY25 | 3 | 2025 | 3 | 2025 |
| FY26 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2025 | 4 | 2025 |
| FY26 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2026 | 2 | 2026 |
| SOW Development FY26 | 3 | 2026 | 3 | 2026 |
| FY27 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2026 | 4 | 2026 |
| FY27 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2027 | 2 | 2027 |
| SOW Development FY27 | 3 | 2027 | 3 | 2027 |
| FY28 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2027 | 4 | 2027 |
| FY28 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2028 | 2 | 2028 |
| SOW Development FY28 | 3 | 2028 | 3 | 2028 |
| FY29 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2028 | 4 | 2028 |
| FY29 Contract Awards to Industry & Technical Reviews by Platform | 1 | 2029 | 2 | 2029 |
| SOW Development FY29 | 3 | 2029 | 3 | 2029 |
| FY30 PEO Review of CIP Allocations, RFPs Issued to Industry | 4 | 2029 | 4 | 2029 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>1356 / *Corrosion Prevention Improvements* | |

| COST ($ in Millions) | Prior Years | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1356: *Corrosion Prevention Improvements* | 0.000 | 0.000 | 4.010 | 5.473 | - | 5.473 | 1.992 | 1.494 | 1.495 | 0.000 | 0.000 | 14.464 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

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

Corrosion Prevention Improvements support Flag Officer (FO) endorsed N98 FRT initiative # POM24-28. This funding will enable the NAE to establish a Center of Excellence for Corrosion and Finish (CoECF) Training focused on educating, training, and certifying qualified, proficient maintainers capable of performing: corrosion identification, corrosion inspection, corrosion prevention, corrosion repair and restoration. Qualified, proficient maintainers will improve material readiness through improved material condition, while also developing the knowledge & maintenance skills of Sailors and Marines.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|---|---|---|---|---|
| ***Title:*** Corrosion Prevention Improvements | 0.000 | 4.010 | 5.473 | 0.000 | 5.473 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2024 Plans:***<br>Establish contract to design and develop suite of course material to be taught within the CoECF. Manage CoECF development via the NAE Corrosion Management Board (CMB). | | | | | |
| ***FY 2025 Base Plans:***<br>Continue design and development suite of course material to be taught within the CoECF. Manage CoECF development via the NAE Corrosion Management Board (CMB). | | | | | |
| ***FY 2025 OCO Plans:***<br>N/A | | | | | |
| ***FY 2024 to FY 2025 Increase/Decrease Statement:***<br>Increase of 1.463 million funds expansion and development of JSE, initial Joint Modular Emitter Interface Standards and Governance and PMTEC Projects | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.000 | 4.010 | 5.473 | 0.000 | 5.473 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**Remarks**

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1356 / *Corrosion Prevention Improvements* |

**D. Acquisition Strategy**

This is a NON-ACAT program. Procurement strategy is determined by market survey and cooperative opportunities.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1356 / *Corrosion Prevention Improvements* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Systems Engineering | Various | Various : Various | 0.000 | 0.000 | | 2.280 | Nov 2023 | 3.773 | Nov 2024 | - | | 3.773 | 4.981 | 11.034 | - |
| Systems Engineering | WR | NAWCAD : Patuxent River | 0.000 | 0.000 | | 0.800 | Oct 2023 | 0.800 | Oct 2024 | - | | 0.800 | 0.000 | 1.600 | - |
| | | **Subtotal** | 0.000 | 0.000 | | 3.080 | | 4.573 | | - | | 4.573 | 4.981 | 12.634 | N/A |

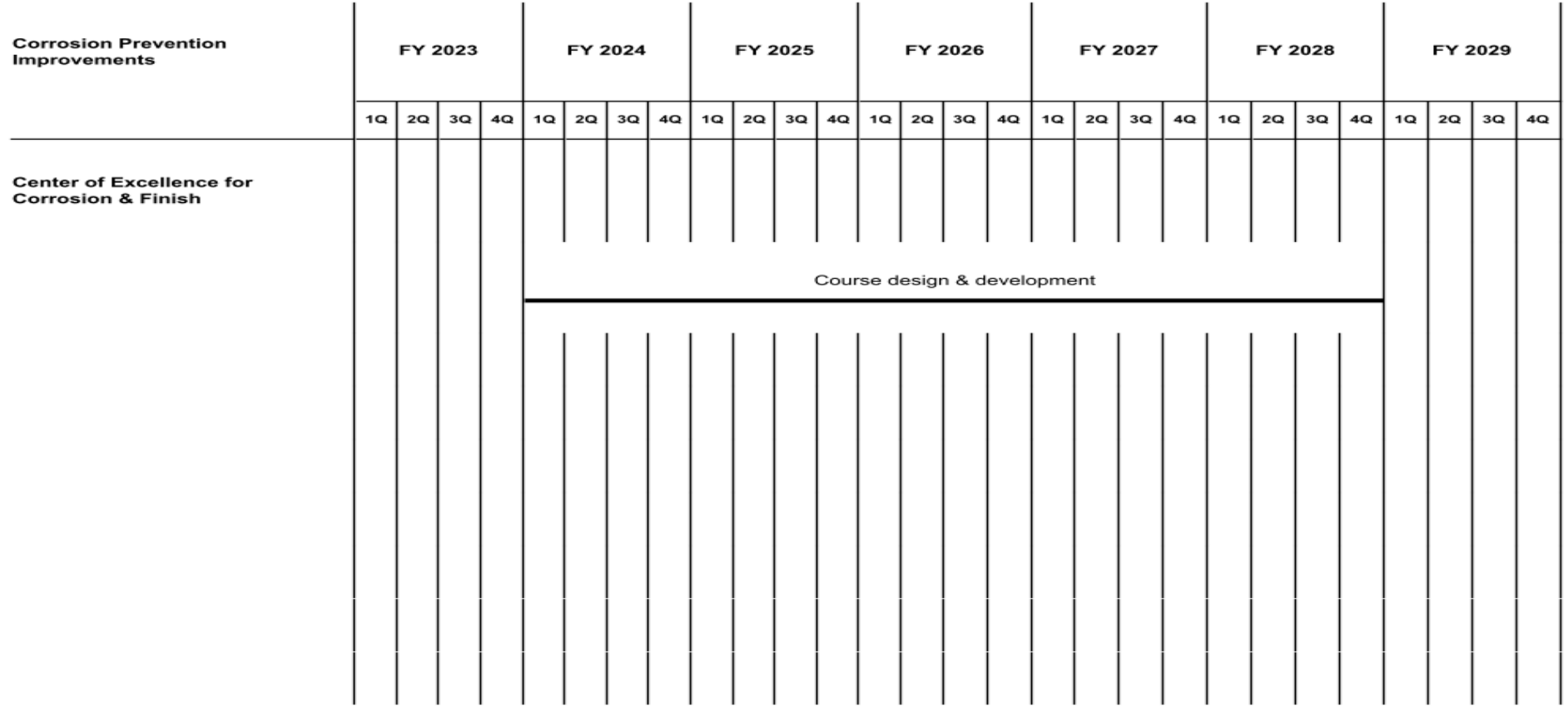
**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Management | WR | NAWCAD : Patuxent River | 0.000 | 0.000 | | 0.930 | Nov 2023 | 0.900 | Nov 2024 | - | | 0.900 | 0.000 | 1.830 | Continuing |
| | | **Subtotal** | 0.000 | 0.000 | | 0.930 | | 0.900 | | - | | 0.900 | 0.000 | 1.830 | N/A |

| | Prior Years | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 0.000 | 0.000 | | 4.010 | | 5.473 | | - | | 5.473 | 4.981 | 14.464 | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1356 / *Corrosion Prevention Improvements* |




*2025PB - 0205633N - 1356*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>1356 / *Corrosion Prevention Improvements* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Corrosion Prevention Improvements*** | | | | |
| Center of Excellence for Corrosion & Finish: Course design & development | 1 | 2024 | 4 | 2028 |

| Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy | | | Date: March 2024 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 7 | R-1 Program Element (Number/Name)<br>PE 0205633N / *Aviation Improvements* | Project (Number/Name)<br>9999 / *Congressional Adds* | |

| COST ($ in Millions) | Prior Years | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9999: *Congressional Adds* | 16.411 | 18.343 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 34.754 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

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

Congressional Adds
C794: Additive manufacturing for metals
C795: FOD mitigation integration
C919: Autonomous FOD mitigation technology
C920: Augmented Reality Remote Maintenance Services (ARRMS)

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2023 | FY 2024 |
|---|---|---|
| ***Congressional Add:*** Autonomous FOD mitigation technology<br>***FY 2023 Accomplishments:*** Funding to support Autonomous FOD mitigation technology.<br>***FY 2024 Plans:*** N/A | 14.482 | 0.000 |
| ***Congressional Add:*** Augmented reality remote maintenance services<br>***FY 2023 Accomplishments:*** Funding to support Augmented Reality Remote Maintenance Services (ARRMS).<br>***FY 2024 Plans:*** N/A | 3.861 | 0.000 |
| **Congressional Adds Subtotals** | 18.343 | 0.000 |

**C. Other Program Funding Summary ($ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>9999 / *Congressional Adds* |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FOD Mitigation Integration | C/CPFF | TBD : TBD | 9.654 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 9.654 | 9.654 |
| Additive Manufacturing - ONR | TBD | ONR : ONR | 6.757 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 6.757 | 6.757 |
| Autonomous FOD mitigation technology | TBD | Moog, Inc : East Aurora, NY | 0.000 | 11.479 | Aug 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 11.479 | 11.479 |
| Autonomous FOD mitigation technology Text | TBD | Parasanti, Inc : Austin, TX | 0.000 | 2.001 | Aug 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.001 | 2.001 |
| Autonomous FOD mitigation technologyxt | TBD | Oreyeon LDA : Coimbra, Portugal | 0.000 | 1.000 | Jun 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.000 | 1.000 |
| ARRMS - Development | TBD | Specialty Systems : Toms River, NJ | 0.000 | 2.820 | Aug 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.820 | 2.820 |
| | | **Subtotal** | 16.411 | 17.300 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 33.711 | N/A |

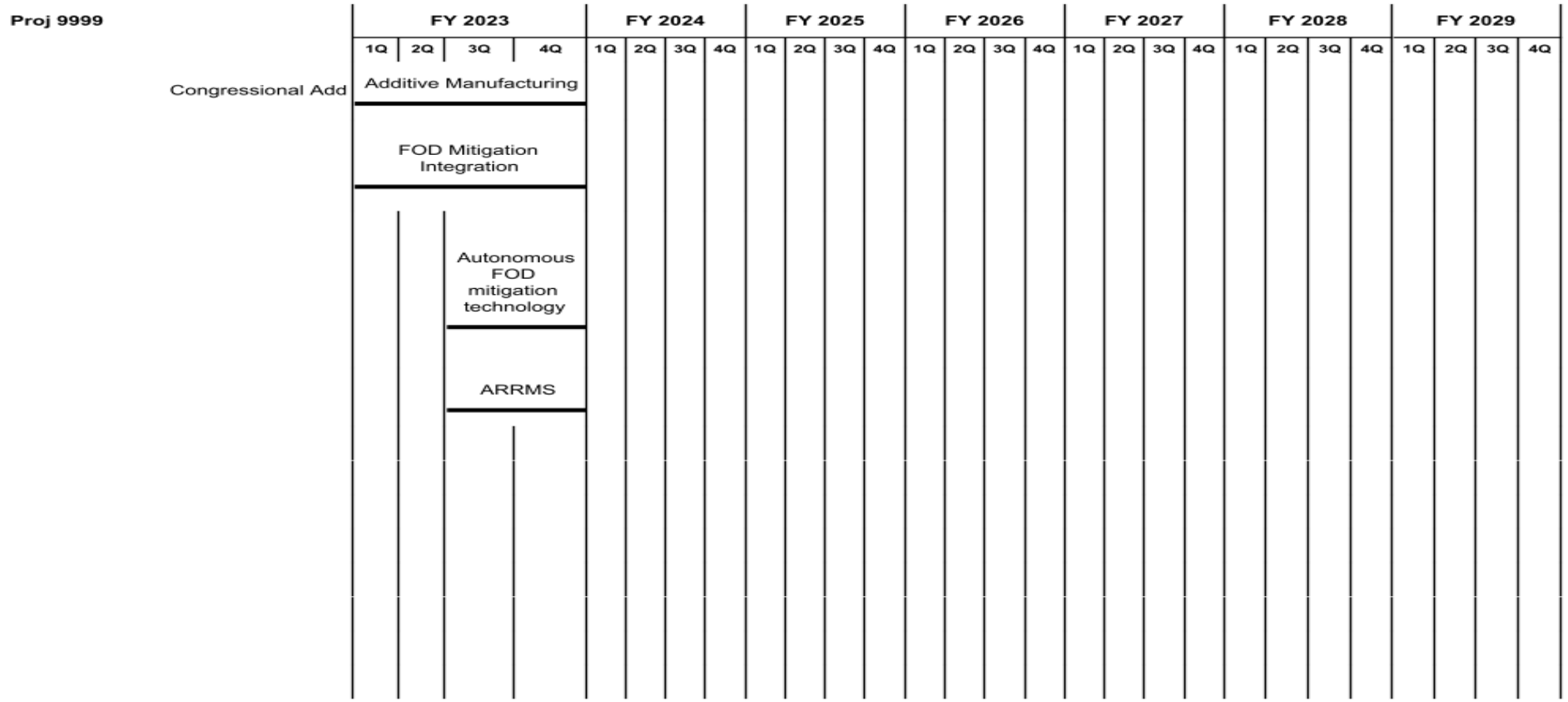
**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARRMS - Support | Various | Various : Various | 0.000 | 1.043 | Apr 2023 | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.043 | - |
| | | **Subtotal** | 0.000 | 1.043 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 1.043 | N/A |

| | Prior Years | FY 2023 Cost | FY 2023 Award Date | FY 2024 Cost | FY 2024 Award Date | FY 2025 Base Cost | FY 2025 Base Award Date | FY 2025 OCO Cost | FY 2025 OCO Award Date | FY 2025 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 16.411 | 18.343 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 34.754 | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>9999 / *Congressional Adds* |




*2025DON - 0205633N - 9999*

| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy | | Date: March 2024 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 7 | **R-1 Program Element (Number/Name)**<br>PE 0205633N / *Aviation Improvements* | **Project (Number/Name)**<br>9999 / *Congressional Adds* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj 9999*** | | | | |
| Congressional Add: Congressional Add Additive Manufacturing | 1 | 2023 | 4 | 2023 |
| Congressional Add: Congressional Add FOD Mitigation Integration | 1 | 2023 | 4 | 2023 |
| Congressional Add: Autonomous FOD mitigation technology | 3 | 2023 | 4 | 2023 |
| Congressional Add: Congressional Add ARRMS | 3 | 2023 | 4 | 2023 |