| Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army | | | | | | | | | | | Date: May 2021 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)* | | | | | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | | | | | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2020** | **FY 2021** | **FY 2022 Base** | **FY 2022 OCO** | **FY 2022 Total** | **FY 2023** | **FY 2024** | **FY 2025** | **FY 2026** | **Cost To Complete** | **Total Cost** |
| Total Program Element | - | - | 8.213 | 11.374 | - | 11.374 | - | - | - | - | - | - |
| BX8: *Cold Weather All-Terrain Vehicle (CATV)* | - | - | 6.065 | 1.825 | - | 1.825 | - | - | - | - | - | - |
| H07: *Family Of Med Tac Veh* | - | - | 2.148 | 9.549 | - | 9.549 | - | - | - | - | - | - |

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

This Program Element (PE) supports continued modernization of the Army's Medium Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: prognostics & preventative maintenance, vetronics, vehicle electrification, Victory Architecture, autonomous operations and other emerging technologies. Furthermore, the PE supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

The Family of Medium Tactical Vehicles (FMTV) includes Cargo, Tractor, Load Handling System (LHS), Wrecker, Expandible Van, Shop Van, and Dump variants with payloads ranging from 3-tons to 10-tons and associated companion trailers. FMTV trucks perform over 55 percent of the Army's local haul, line haul, and unit resupply missions. It operates throughout theater as multi-purpose transportation vehicles in combat, combat support, and combat service support units.

Funding from this Program Element will be used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield. This includes upgrades in survivability and crew protection, improved safety by leveraging advancements in commercial active safety technologies, modernizing the aging Low Velocity Air Drop (LVAD) fleet of vehicles, improved utilization through modularity, integration of advanced high efficiency powertrains and fuel saving technologies, and insertion of autonomous vehicle capabilities that will change the way transportation missions are conducted around the world.

FY 2022 Project H07 Base funds in the amount of $3.071 million will be used for Improved Vehicle Safety Technologies and FMTV A2 Operational Testing and Adversarial Assessment.

FY 2022 Project H07 Base funds in the amount of $6.478 million will be used for the LVAD Next Generation Analysis STS Work Directive, Test Assets, and Live Fire Testing. Updates to the LVAD are needed to address obsolescence issues and modernize the fleet.

The Cold-weather All-Terrain Vehicle (CATV) is a tracked vehicle that will provide transportation for up to a 10-Soldier element, emergency medical evacuation, command and control capability, and general cargo transportation on- and off-road in an Arctic environment under a wide range of otherwise impassable terrain, to include frozen ice, and extreme cold weather conditions to support year-round training as well as to conduct Homeland Defense (HD), Homeland Security (HS), and Defense support of Civil Authorities (DSCA) mission. The CATV will employ two carrier variants: General-purpose carrier variant capable of providing transport for not less than 9 Soldiers, plus the driver within a cab/enclosure (10 Soldiers) with equipment and supplies to sustain three days of combat operations. The General

| Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army | Date: May 2021 |
|---|---|
| **Appropriation/Budget Activity**<br>2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)* | **R-1 Program Element (Number/Name)**<br>PE 0604604A *I Medium Tactical Vehicles* |

Purpose variant will be reconfigurable to a casualty evacuation (CASEVAC) variant capable of transporting medical equipment, two caregivers, and not less than two litter patients or four ambulatory patients in addition to the driver within a cab/enclosure. The General Purpose variant will also be reconfigurable to a Command and Control (C2) variant providing the space weight and power to hosting standard Joint communications and common operating picture (COP) platforms. The C2 and COP equipment should be able to be used enroute or with minimal setup upon halt by six Soldiers in addition to the driver within a cab/enclosure. Cargo/flatbed capable of carrying outsized equipment and cargo. The cargo variant should allow for loading cargo with a forklift from either side (i.e. dropside or flatbed configuration) and have a cab/enclosure for two Soldiers (driver and vehicle commander).

FY 2022 CATV Project BX8 budget activities in the amount of $1.825 million include System Engineering and Management Support, and Test and Evaluation.

| B. Program Change Summary ($ in Millions) | FY 2020 | FY 2021 | FY 2022 Base | FY 2022 OCO | FY 2022 Total |
|---|---|---|---|---|---|
| Previous President's Budget | 0.000 | 8.523 | 6.448 | - | 6.448 |
| Current President's Budget | 0.000 | 8.213 | 11.374 | - | 11.374 |
| Total Adjustments | 0.000 | -0.310 | 4.926 | - | 4.926 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | -0.310 | | | |
| • Adjustments to Budget Years | - | - | 4.926 | - | 4.926 |

**Change Summary Explanation**

FY 2022 increase is for Project H07 LVAD Next Generation Model.

| Exhibit R-2A, RDT&E Project Justification: PB 2022 Army | | | Date: May 2021 |
|---|---|---|---|
| Appropriation/Budget Activity<br>2040 / 5 | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | Project (Number/Name)<br>BX8 / *Cold Weather All-Terrain Vehicle (CATV)* | |

| COST ($ in Millions) | Prior Years | FY 2020 | FY 2021 | FY 2022 Base | FY 2022 OCO | FY 2022 Total | FY 2023 | FY 2024 | FY 2025 | FY 2026 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BX8: *Cold Weather All-Terrain Vehicle (CATV)* | - | - | 6.065 | 1.825 | - | 1.825 | - | - | - | - | - | - |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

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

The Cold-weather All-Terrain Vehicle (CATV) is a tracked vehicle that will provide transportation for up to a 10-Soldier element, emergency medical evacuation, command and control capability, and general cargo transportation on- and off-road in an Arctic environment under a wide range of otherwise impassable terrain, to include frozen ice, and extreme cold weather conditions to support year-round training as well as to conduct Homeland Defense (HD), Homeland Security (HS), and Defense support of Civil Authorities (DSCA) mission. The CATV will employ two carrier variants: General-purpose carrier variant capable of providing transport for not less than 9 Soldiers, plus the driver within a cab/enclosure (10 Soldiers) with equipment and supplies to sustain three days of combat operations. The General Purpose variant will be reconfigurable to a casualty evacuation (CASEVAC) variant capable of transporting medical equipment, two caregivers, and not less than two litter patients or four ambulatory patients in addition to the driver within a cab/enclosure. The General Purpose variant will also be reconfigurable to a Command and Control (C2) variant providing the space weight and power to hosting standard Joint communications and common operating picture (COP) platforms. The C2 and COP equipment should be able to be used enroute or with minimal setup upon halt by six Soldiers in addition to the driver within a cab/enclosure. Cargo/flatbed capable of carrying outsized equipment and cargo. The cargo variant should allow for loading cargo with a forklift from either side (i.e. dropside or flatbed configuration) and have a cab/enclosure for two Soldiers (driver and vehicle commander).

Testing in ECW is necessary to prove the adequacy to the requirements with timing necessary to support planned Field Unit Equipped (FUE) in FY23. FUE is needed as soon as possible to replace the current capability that is reaching the end of life due to obsolescence

FY 2022 CATV budget activities in the amount of $1.825 million include System Engineering and Management Support, and Test and Evaluation.

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|
| ***Title:*** CATV Prototype | - | 4.271 | - |
| ***Description:*** Funding provided for the procurement of the CATV Prototypes. | | | |
| ***FY 2021 Plans:***<br>Funding provided for the procurement of the CATV Prototypes. | | | |
| ***FY 2021 to FY 2022 Increase/Decrease Statement:***<br>Decrease due to reduction in testing. | | | |
| ***Title:*** CATV Systems Engineering/Management Support | - | 0.794 | - |

| Exhibit R-2A, RDT&E Project Justification: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>BX8 / *Cold Weather All-Terrain Vehicle (CATV)* |

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|
| ***Description:*** Funding provided for Matrix personnel and Program Management (PM) support of the CATV program.<br>***FY 2021 Plans:***<br>Funding provided for Matrix personnel and Program Management (PM) support of the CATV program.<br>***FY 2021 to FY 2022 Increase/Decrease Statement:***<br>Funding increased to be used for System Engineering, management support and Test and Evaluation. | | | |
| ***Title:*** CATV Test and Evaluation<br>***Description:*** Funding provided for endurance, performance, transportability testing and production verification testing for CATV.<br>***FY 2021 Plans:***<br>Funding provided for endurance, performance, and production verification testing for CATV.<br>***FY 2022 Plans:***<br>Funding provided for endurance, performance, and sling load testing on down selected prototype variants for CATV.<br>***FY 2021 to FY 2022 Increase/Decrease Statement:***<br>Increase due to adding Transportability testing. | - | 1.000 | 1.825 |
| **Accomplishments/Planned Programs Subtotals** | - | 6.065 | 1.825 |

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

| Line Item | FY 2020 | FY 2021 | FY 2022 Base | FY 2022 OCO | FY 2022 Total | FY 2023 | FY 2024 | FY 2025 | FY 2026 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • D15620: *Family of Cold Weather All-Terrain Vehicle (CATV)* | - | 9.249 | 16.450 | - | 16.450 | - | - | - | - | - | - |

**Remarks**

**D. Acquisition Strategy**

The Acquisition Strategy supports a two-step acquisition approach with an OTA based Prototype contract in 2QFY21 to two vendors for the prototype phase and a down select to one vendor on a Production contract in 3QFY22 that will support the production phase. The Army Procurement Objective (APO) is 110 Cold-weather All-Terrain Vehicles (CATV).

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army | | | Date: May 2021 |
|---|---|---|---|
| Appropriation/Budget Activity<br>2040 / 5 | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | Project (Number/Name)<br>BX8 / *Cold Weather All-Terrain Vehicle (CATV)* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2020 Cost | FY 2020 Award Date | FY 2021 Cost | FY 2021 Award Date | FY 2022 Base Cost | FY 2022 Base Award Date | FY 2022 OCO Cost | FY 2022 OCO Award Date | FY 2022 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATV Prototypes | C/CS | Oshkosh Defense and BAE : Oshkosh, WI & York, PA | - | - | | 4.271 | Mar 2021 | - | | - | | - | 0.000 | 4.271 | - |
| | | **Subtotal** | - | - | | 4.271 | | - | | - | | - | 0.000 | 4.271 | N/A |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2020 Cost | FY 2020 Award Date | FY 2021 Cost | FY 2021 Award Date | FY 2022 Base Cost | FY 2022 Base Award Date | FY 2022 OCO Cost | FY 2022 OCO Award Date | FY 2022 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATV Engineering and Management Support | Various | Various : Various | - | - | | 0.794 | Dec 2020 | - | | - | | - | 0.000 | 0.794 | - |
| | | **Subtotal** | - | - | | 0.794 | | - | | - | | - | 0.000 | 0.794 | N/A |

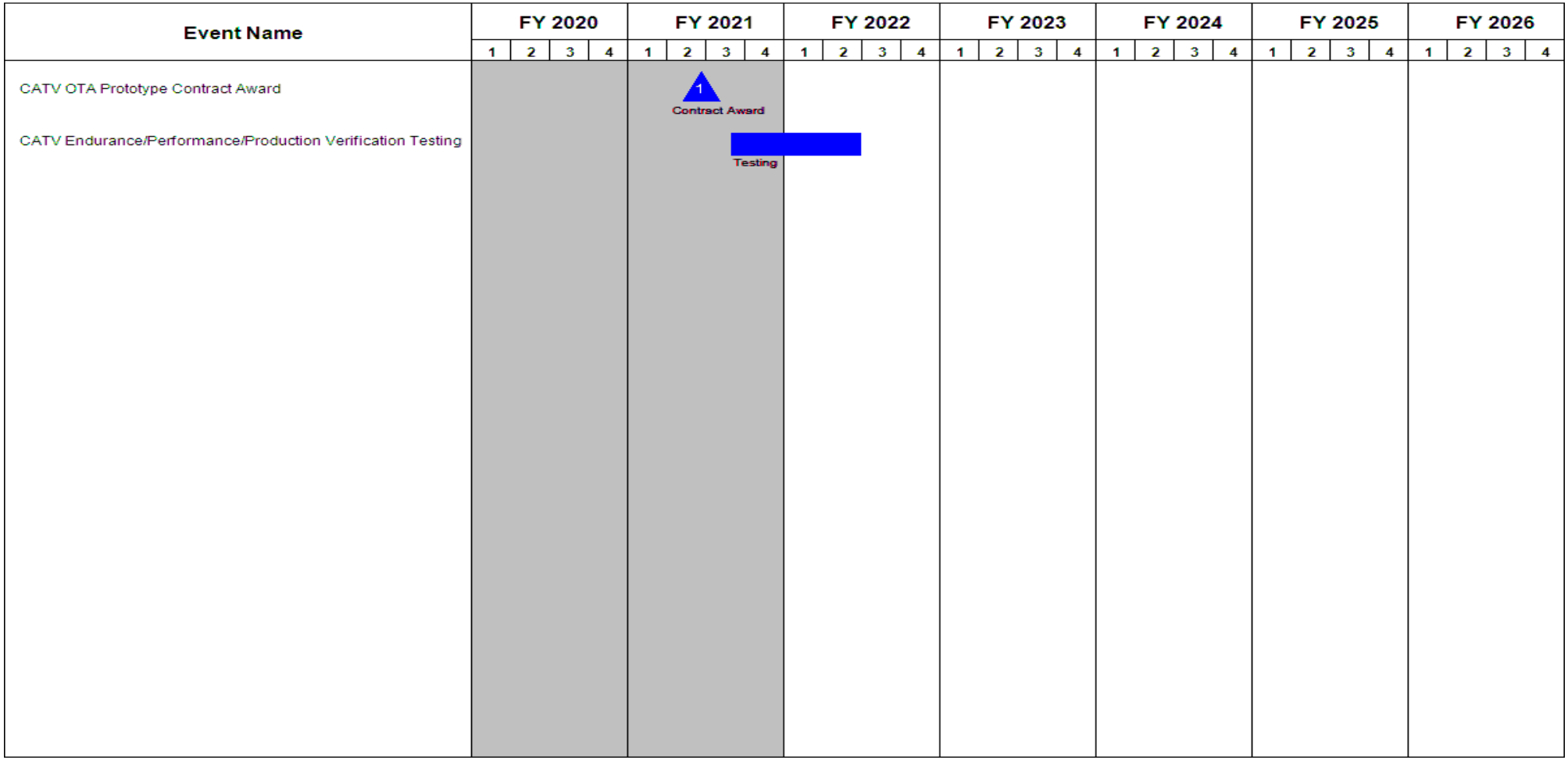
**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2020 Cost | FY 2020 Award Date | FY 2021 Cost | FY 2021 Award Date | FY 2022 Base Cost | FY 2022 Base Award Date | FY 2022 OCO Cost | FY 2022 OCO Award Date | FY 2022 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATV Test and Evalution | MIPR | Various : Various | - | - | | 1.000 | Jun 2021 | 1.825 | Mar 2022 | - | | 1.825 | 0.000 | 2.825 | - |
| | | **Subtotal** | - | - | | 1.000 | | 1.825 | | - | | 1.825 | 0.000 | 2.825 | N/A |

| | Prior Years | FY 2020 | | FY 2021 | | FY 2022 Base | | FY 2022 OCO | | FY 2022 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | - | - | | 6.065 | | 1.825 | | - | | 1.825 | 0.000 | 7.890 | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>BX8 / *Cold Weather All-Terrain Vehicle (CATV)* |



| Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>BX8 / *Cold Weather All-Terrain Vehicle (CATV)* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events** | **Quarter** | **Year** | **Quarter** | **Year** |
| CATV OTA Prototype Contract Award | 2 | 2021 | 2 | 2021 |
| CATV Endurance/Performance/Production Verification Testing | 3 | 2021 | 2 | 2022 |

| Exhibit R-2A, RDT&E Project Justification: PB 2022 Army | | | | | | | | | | | Date: May 2021 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>2040 / 5 | | | | | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | | | | Project (Number/Name)<br>H07 / *Family Of Med Tac Veh* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2020** | **FY 2021** | **FY 2022 Base** | **FY 2022 OCO** | **FY 2022 Total** | **FY 2023** | **FY 2024** | **FY 2025** | **FY 2026** | **Cost To Complete** | **Total Cost** |
| H07: *Family Of Med Tac Veh* | - | - | 2.148 | 9.549 | - | 9.549 | - | - | - | - | - | - |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

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

The FMTVA2 production and ECP modernization effort restores vehicle performance that was lost due to the addition of armor protection kits as the threat to tactical vehicles and the FMTV has increased. The FMTVA2 also addresses Space, Weight, Power, and Cooling (SWaP-C) constraints from having to host an increasing amount of C4ISR and Counter-IED equipment. PD MTV is executing the FMTVA2 effort documented in a signed Acquisition Decision Memorandum by the AAE on 16 November 2015.

FY 2022 Project H07 Base funds in the amount of $3.071 million will be used for the Improved Vehicle Safety Technologies and FMTVA2 Operational Testing and Adversarial Assessment .

The three FMTV LVAD models (M1081, M1093, M1094) ended production in 2009 and represent the oldest vehicles in the FMTV fleet. Updates to the LVAD are needed to address obsolescence issues and modernize the fleet.

FY 2022 Project H07 Base funds in the amount of $6.478 million will be used for the FMTV Low-velocity Air Drop (LVAD) Next Generation STS Work Directive, prototype LVAD conversion kits and procurement of test assets to support Live Fire and airdrop certification.

The FMTVA1P2 ended production in 2021 and represents the highest density FMTV model with over 40,000 vehicles fielded to date. The FMTVA1P2 will remain in the tactical vehicle fleet until 2040 and beyond. To keep the A1P2 fleet viable into the future and able to perform its mission in austere environments, upgrades to Survivability and Crew Protection Kits will be required as the threat on the battlefield evolves.

To ensure supportability of the FMTVA1P2 through FY 2040 and beyond, the PD MTV, as lifecycle managers for the system, shall address potential obsolescence issues with the powertrain and Material Handling Equipment used on the FMTV.

Increasing survivability and crew protection of the FMTVA1P2 comes at the expense of decreased vehicle mobility and performance in soft soil and winter environments. The A1P2 is being asked to carry more weight than what it was originally designed for. Low risk, highly commercial improvements to the A1P2 driveline, suspension, and tires can be made to minimize the loss in mobility performance.

Funding supports modernization of the current Tactical Wheeled Vehicle fleets by investigating technology insertions including, but not limited to: prognostics & preventative maintenance, vetronics, Victory Architecture, autonomous operations and other emerging technologies. Funding also supports developing initial prototypes to enable refinement of Operational Requirements and early user feedback to support future sustainment and operational movement operating concepts.

| Exhibit R-2A, RDT&E Project Justification: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>H07 / *Family Of Med Tac Veh* |

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|
| ***Title:*** FMTVA2 Production and ECP Modernization Effort<br>***Description:*** Funding used to support the continued evolution of the future FMTV fleet as well as tech insertion opportunities to keep the current FMTV fleet relevant on today's battlefield.The FMTVA2 production and ECP modernization effort restores vehicle performance that was lost due to the addition of armor protection kits as the threat to tactical vehicles and the FMTV has increased. Live Fire test assets are needed to support Live Fire Testing required per Chapter 139, Title 10 USC. Operational Testing required per Chapter 141, Title 10 USC.<br>***FY 2021 Plans:***<br>Funding for Operational Testing of FMTVA2 truck.<br>***FY 2022 Plans:***<br>FY 2022 planned projects are Improved Vehicle Safety Technologies and FMTVA2 Operational Testing and Adversarial Assessment.<br>***FY 2021 to FY 2022 Increase/Decrease Statement:***<br>Funds increased due to increased testing requirements. | - | 1.850 | 3.071 |
| ***Title:*** FMTV LVAD Technical Demonstrator Vehicle Design and Build<br>***Description:*** Updates to the Low Velocity Air Drop (LVAD) are needed to address obsolescence issues and to modernize the fleet.<br>***FY 2021 Plans:***<br>Funding used for design and development of the FMTV LVAD technical demonstrator.<br>***FY 2021 to FY 2022 Increase/Decrease Statement:***<br>Decrease due to completion of Technical Demonstrator effort. | - | 0.298 | - |
| ***Title:*** FMTV LVAD Next Generation Model<br>***Description:*** Updates to the FMTV Low Velocity Air Drop (LVAD) are needed to address obsolescence issues and to modernize the fleet.<br>***FY 2022 Plans:***<br>FY 2022 budget activities include the LVAD STS Work Directive, conversion of nine prototype test assets (M1081 and M1093), production of four Live Fire trucks along with Live Fire testing.<br>***FY 2021 to FY 2022 Increase/Decrease Statement:*** | - | - | 6.478 |

| Exhibit R-2A, RDT&E Project Justification: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>H07 / *Family Of Med Tac Veh* |

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|
| FY 2022 increase due to the procurement of test assets and testing for the FMTV LVAD Next Generation Model. | | | |
| **Accomplishments/Planned Programs Subtotals** | - | 2.148 | 9.549 |

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

| Line Item | FY 2020 | FY 2021 | FY 2022 Base | FY 2022 OCO | FY 2022 Total | FY 2023 | FY 2024 | FY 2025 | FY 2026 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • D15500: *Family Of Medium Tactical Veh (FMTV)* | 138.057 | 181.092 | 36.885 | - | 36.885 | - | - | - | - | - | - |
| • D04016: *MEDIUM TACTICAL VEHICLE PROTECTION KITS* | 60.531 | 44.593 | 11.709 | - | 11.709 | - | - | - | - | - | - |

**Remarks**

**D. Acquisition Strategy**

The strategy for the FMTVA2 Production and ECP Modernization Effort led to award of a Firm-Fixed Price Requirements contract that will have a base award of five years (two years for vehicle testing and three production years) with two, one-year option production periods and to conduct FMTVA2 Live Fire and Operational Testing. These efforts will utilize Government test facilities.

The strategy for the Next Generation FMTV LVAD Model Configuration is to address obsolescence issues and bring the configuration up to today's standards. This effort will utilize a System Technical Support (STS) contract with the current FMTV Original Equipment Manufacturer (OEM).

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army | | | Date: May 2021 |
|---|---|---|---|
| Appropriation/Budget Activity<br>2040 / 5 | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | Project (Number/Name)<br>H07 / *Family Of Med Tac Veh* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2020 Cost | FY 2020 Award Date | FY 2021 Cost | FY 2021 Award Date | FY 2022 Base Cost | FY 2022 Base Award Date | FY 2022 OCO Cost | FY 2022 OCO Award Date | FY 2022 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FMTV LVAD Next Generation Development | SS/FFP | Oshkosh Defense : Oshkosh, WI | 0.750 | - | | - | | 0.671 | Feb 2022 | - | | 0.671 | 0.000 | 1.421 | - |
| Improved Vehicle Safety Technologies | MIPR | ATEC : ABERDEEN PROVING GROUNDS, MD | 2.700 | - | | - | | 0.221 | Jul 2022 | - | | 0.221 | 0.000 | 2.921 | - |
| | | **Subtotal** | 3.450 | - | | - | | 0.892 | | - | | 0.892 | 0.000 | 4.342 | N/A |

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

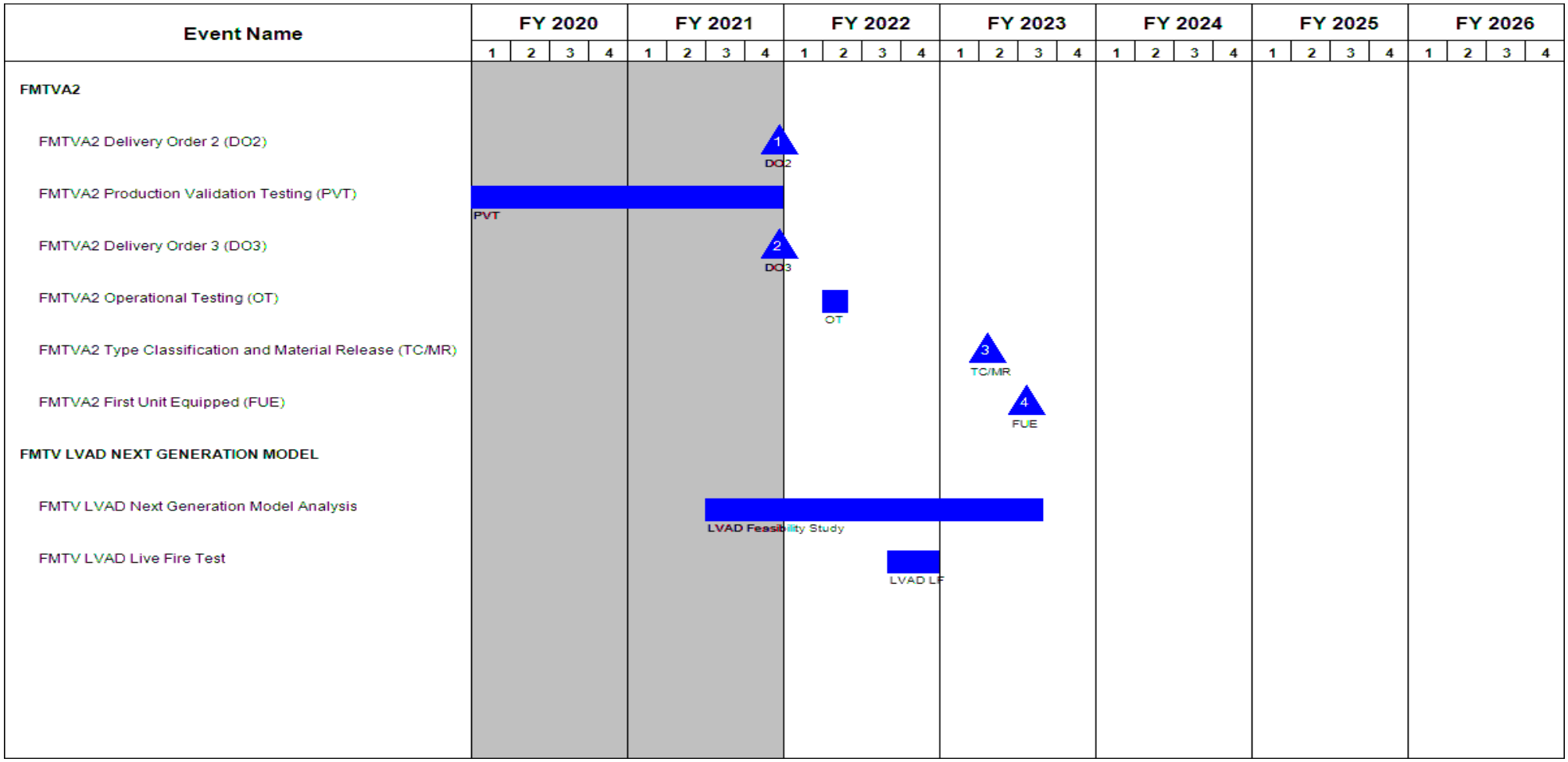
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2020 Cost | FY 2020 Award Date | FY 2021 Cost | FY 2021 Award Date | FY 2022 Base Cost | FY 2022 Base Award Date | FY 2022 OCO Cost | FY 2022 OCO Award Date | FY 2022 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FMTVA2 Operational Testing | MIPR | ATC : Aberdeen Proving Ground, MD | - | - | | - | | 2.850 | Jan 2022 | - | | 2.850 | 0.000 | 2.850 | - |
| FMTV LVAD Technical Demonstrator Testing | SS/FFP | NATC : Stagecoach, NV | - | - | | 0.298 | Mar 2021 | - | | - | | - | 0.000 | 0.298 | - |
| FMTV LVAD Prototypes | SS/FFP | Oshkosh Defense : Oshkosh, WI | - | - | | 1.850 | Mar 2021 | 2.342 | Nov 2021 | - | | 2.342 | 0.000 | 4.192 | - |
| FMTV LVAD Live Fire Vehicle Test Assets | SS/FFP | Oshkosh Defense : Oshkosh, WI | - | - | | - | | 1.810 | May 2022 | - | | 1.810 | 0.000 | 1.810 | - |
| FMTV LVAD Live Fire Underbody Armor Test Assets | SS/FFP | Oshkosh Defense : Oshkosh, WI | - | - | | - | | 0.200 | May 2022 | - | | 0.200 | 0.000 | 0.200 | - |
| FMTV LVAD Live Fire B-Kit Test Assets | Option/ FFP | O'Gara Armoring : Fairfield, OH | - | - | | - | | 0.200 | May 2022 | - | | 0.200 | 0.000 | 0.200 | - |
| FMTV LVAD Live Fire Testing | MIPR | Army Test Center (ATC) : Aberdeen Proving Grounds, MD | - | - | | - | | 0.838 | Jun 2022 | - | | 0.838 | 0.000 | 0.838 | - |
| ESC Tuning | SS/FFP | OshKosh Defense : Oshkosh, WI | - | - | | - | | 0.417 | Feb 2022 | - | | 0.417 | 0.000 | 0.417 | - |
| | | **Subtotal** | - | - | | 2.148 | | 8.657 | | - | | 8.657 | 0.000 | 10.805 | N/A |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army | | | Date: May 2021 |
|---|---|---|---|
| Appropriation/Budget Activity<br>2040 / 5 | R-1 Program Element (Number/Name)<br>PE 0604604A / *Medium Tactical Vehicles* | Project (Number/Name)<br>H07 / *Family Of Med Tac Veh* | |

| | Prior Years | FY 2020 | | FY 2021 | | FY 2022 Base | | FY 2022 OCO | | FY 2022 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 3.450 | - | | 2.148 | | 9.549 | | - | | 9.549 | 0.000 | 15.147 | N/A |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>H07 / *Family Of Med Tac Veh* |



| Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army | | Date: May 2021 |
|---|---|---|
| **Appropriation/Budget Activity**<br>2040 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604604A / *Medium Tactical Vehicles* | **Project (Number/Name)**<br>H07 / *Family Of Med Tac Veh* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events** | **Quarter** | **Year** | **Quarter** | **Year** |
| FMTVA2 | 1 | 2019 | 4 | 2024 |
| FMTVA2 Contract Award/Delivery Order 1 | 2 | 2018 | 2 | 2018 |
| FMTVA2 Allocated Baseline Review (ABR) | 3 | 2018 | 3 | 2018 |
| FMTVA2 Product Baseline Review (PBR) | 4 | 2018 | 4 | 2018 |
| FMTVA2 Delivery Order 2 (DO2) | 4 | 2021 | 4 | 2021 |
| FMTVA2 Production Validation Testing (PVT) | 3 | 2019 | 4 | 2021 |
| FMTVA2 Live Fire Test & Evaluation (LFT&E) | 3 | 2019 | 4 | 2019 |
| FMTVA2 Delivery Order 3 (DO3) | 4 | 2021 | 4 | 2021 |
| FMTVA2 Operational Testing (OT) | 2 | 2022 | 2 | 2022 |
| FMTVA2 Type Classification and Material Release (TC/MR) | 2 | 2023 | 2 | 2023 |
| FMTVA2 First Unit Equipped (FUE) | 3 | 2023 | 3 | 2023 |
| FMTVA1P2 | 1 | 2019 | 4 | 2019 |
| FMTVA1P2 FY 2018 Vehicle Delivery | 4 | 2018 | 4 | 2019 |
| FMTV LVAD NEXT GENERATION MODEL | 3 | 2020 | 2 | 2025 |
| FMTV LVAD Next Generation Model Analysis | 3 | 2021 | 3 | 2023 |
| FMTV LVAD Live Fire Test | 3 | 2022 | 4 | 2022 |