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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

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| Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i> | R-1 Program Element (Number/Name) PE 0603920A / <i>Humanitarian Demining</i> |
|---|--|

| COST (\$ in Millions) | Prior Years | FY 2021 | FY 2022 | FY 2023 Base | FY 2023 OCO | FY 2023 Total | FY 2024 | FY 2025 | FY 2026 | FY 2027 | Cost To Complete | Total Cost |
|-----------------------------------|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 16.690 | 19.000 | 8.933 | - | 8.933 | 9.028 | 9.201 | 9.297 | 9.294 | 0.000 | 81.443 |
| CD5: <i>Humanitarian Demining</i> | - | 16.690 | 19.000 | 8.933 | - | 8.933 | 9.028 | 9.201 | 9.297 | 9.294 | 0.000 | 81.443 |

A. Mission Description and Budget Item Justification

This Program Element (PE) develops, demonstrates and validates cost-effective technologies for use in humanitarian demining via Outside Continental United States (OCONUS) operational field evaluations. This PE's low-cost and highly effective technology reduces the landmine and unexploded ordnance (UXO) / improvised explosive device (IED) threat to deployed United States (US) forces and the local population. This PE coordinates with the Department of State's Weapons Removal and Abatement Program, the Department of Defense (DoD) Humanitarian Mine Action (HMA) programs of the Combatant Commands (CCMDs), and international mine action organizations and foreign militaries. New technology requirements and areas of emphasis are identified and validated at annual Requirements Workshop and UXO/IED Working Group Meetings. Technology investments are prioritized using the results of these meetings and CCMD security cooperation and theater campaign plan HMA objectives. This PE advances the state-of-the-art of demining technologies and evaluates these technologies utilizing host nation humanitarian demining partners.

This PE supports and bolsters the CCMD stability operations mission as directed under Department of Defense Instruction (DODI) 3000.05 to foster mil-to-mil engagement, and bolster economic security and development with partner nations worldwide. Additionally, this PE fosters nations' mine action capacity while improving DoD's visibility and access, generating long-term positive perceptions of DoD and the US, and fostering collaborative relationships with host nation governments. It also directly supports the National Defense Strategy through ensuring common domains remain open and free.

This PE utilizes a research and development plan based on operational test data gained through Operational Field Evaluations (OFEs). These OFEs provide this PE a unique capability to collect this data against live mines/UXO in actual minefields around the world. This data is unavailable to any other DoD organization. This OFE data drives future humanitarian demining investment decisions and is shared and leveraged by the U.S. Army's Army Futures Command programs to further improve U.S. forces' technologies. In addition, this PE provides mine and UXO detector training to the CCMDs at the Humanitarian Demining Training Center (HDTC) in support of Military to Military training and partnerships. Since 1995 the program has fielded technologies for 234 evaluations in 43 countries, including Afghanistan, Angola, Cambodia, Colombia, Iraq, Kosovo, Ukraine, and Vietnam. This program's technologies have cleared 71.2 million square meters of the world's toughest minefields, and found or destroyed 213,220 mines and UXO.

This PE supports the DoD's strategic guidance to address instability and reduce the demand for significant US force commitments to stability operations; with DOD 3000.05 (Stability Operations) and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3207.01C (Department of Defense Support to Humanitarian Mine Action) to reduce the social, economic and environmental impact of landmines and unexploded ordnance.

This PE will be executed by the Army Futures Command (AFC).

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| Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i> | R-1 Program Element (Number/Name) PE 0603920A / <i>Humanitarian Demining</i> |
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| B. Program Change Summary (\$ in Millions) | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023 Base</u> | <u>FY 2023 OCO</u> | <u>FY 2023 Total</u> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 16.690 | 8.649 | 0.000 | - | 0.000 |
| Current President's Budget | 16.690 | 19.000 | 8.933 | - | 8.933 |
| Total Adjustments | 0.000 | 10.351 | 8.933 | - | 8.933 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | 10.351 | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Adjustments to Budget Years | - | - | 8.933 | - | 8.933 |

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: CD5: *Humanitarian Demining*

Congressional Add: *Program Increase*

| | <u>FY 2021</u> | <u>FY 2022</u> |
|--|----------------|----------------|
| | 8.485 | 10.351 |
| Congressional Add Subtotals for Project: CD5 | 8.485 | 10.351 |
| Congressional Add Totals for all Projects | 8.485 | 10.351 |

Change Summary Explanation

Fiscal Year 2023 (FY23) funding increase reflects the fact that the FY22 President's Budget request did not include out-year funding.

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| Exhibit R-2A, RDT&E Project Justification: PB 2023 Army | | | | | | | | | | Date: April 2022 | | |
| Appropriation/Budget Activity 2040 / 3 | | | | | R-1 Program Element (Number/Name) PE 0603920A / Humanitarian Demining | | | | Project (Number/Name) CD5 / Humanitarian Demining | | | |
| COST (\$ in Millions) | Prior Years | FY 2021 | FY 2022 | FY 2023 Base | FY 2023 OCO | FY 2023 Total | FY 2024 | FY 2025 | FY 2026 | FY 2027 | Cost To Complete | Total Cost |
| CD5: <i>Humanitarian Demining</i> | - | 16.690 | 19.000 | 8.933 | - | 8.933 | 9.028 | 9.201 | 9.297 | 9.294 | 0.000 | 81.443 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

This Project develops, demonstrates and validates cost-effective technologies for use in humanitarian demining via Outside Continental United States (OCONUS) operational field evaluations. This Project's low-cost and highly effective technology reduces the landmine and unexploded ordnance (UXO) / improvised explosive device (IED) threat to deployed United States (US) forces and the local population. This Project coordinates with the Department of State's Weapons Removal and Abatement Program, the Department of Defense (DoD) Humanitarian Mine Action (HMA) programs of the Combatant Commands (CCMDs), and international mine action organizations and foreign militaries. New technology requirements and areas of emphasis are identified and validated at annual Requirements Workshop and UXO/IED Working Group Meetings. Technology investments are prioritized using the results of these meetings and CCMD security cooperation and theater campaign plan HMA objectives. This Project advances the state-of-the-art of demining technologies and evaluates these technologies utilizing host nation humanitarian demining partners.

This Project supports and bolsters the CCMD stability operations mission as directed under Department of Defense Instruction (DODI) 3000.05 to foster mil-to-mil engagement, and bolster economic security and development with partner nations worldwide. Additionally, this Project fosters nations' mine action capacity while improving DoD's visibility and access, generating long-term positive perceptions of DoD and the US, and fostering collaborative relationships with host nation governments. It also directly supports the National Defense Strategy through ensuring common domains remain open and free.

This Project utilizes a research and development plan based on operational test data gained through Operational Field Evaluations (OFEs). These OFEs provide this Project a unique capability to collect this data against live mines/UXO in actual minefields around the world. This data is unavailable to any other DoD organization. This OFE data drives future humanitarian demining investment decisions and is shared and leveraged by the U.S. Army's Army Futures Command programs to further improve U.S. forces' technologies. In addition, this Project provides mine and UXO detector training to the CCMDs at the Humanitarian Demining Training Center (HDTTC) in support of Military to Military training and partnerships. Since 1995 the program has fielded technologies for 234 evaluations in 43 countries, including Afghanistan, Angola, Cambodia, Colombia, Iraq, Kosovo, Ukraine, and Vietnam. This program's technologies have cleared 71.2 million square meters of the world's toughest minefields, and found or destroyed 213,220 mines and UXO.

This Project supports the DoD's strategic guidance to address instability and reduce the demand for significant US force commitments to stability operations; with DOD 3000.05 (Stability Operations) and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3207.01C (Department of Defense Support to Humanitarian Mine Action) to reduce the social, economic and environmental impact of landmines and unexploded ordnance.

This Project will be executed by the Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)

| | | | |
|--|----------------|----------------|----------------|
| | FY 2021 | FY 2022 | FY 2023 |
| Title: Humanitarian Demining Technologies | 8.205 | 8.333 | 8.933 |

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| Appropriation/Budget Activity 2040 / 3 | R-1 Program Element (Number/Name) PE 0603920A / Humanitarian Demining | Project (Number/Name) CD5 / Humanitarian Demining |
|--|---|---|

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|---|----------------|----------------|----------------|
| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2021 | FY 2022 | FY 2023 |
|---|----------------|----------------|----------------|

Description: This effort adapts commercial-off-the-shelf equipment, integrates mature technologies, and leverages research and development activity within the Army, particularly the AFC CCDC Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) Tactical Countermining mission area. This effort supports the DoD HMA programs of the CCMDs and aims to improve existing technologies for mine/UXO detection, technical survey/area reduction, mechanical mine/UXO clearance, vegetation clearance, and mechanical mine neutralization.

FY 2022 Plans:

Will identify, develop, and assess new technologies that provide individual mine/UXO detection, mechanical mine/UXO and vegetation clearance, and mechanical mine neutralization. Will demonstrate emerging mine/UXO defeat technologies and capabilities in relevant environments. Will execute threat surveys and country assessments. Will execute HD R&D requirements workshop to define global technology needs for humanitarian mine action. Will continue the ongoing successful operational evaluations from FY21.

FY 2023 Plans:

Will develop and mature technologies to improve mine/UXO detection, vegetation clearance, and mechanical mine neutralization capabilities. Will demonstrate and validate emerging mine/UXO defeat technologies and capabilities in live threat environments. Will continue execution of threat surveys and site assessments. Will execute annual HD R&D requirements workshop to define global technology needs for humanitarian mine action. Will continue the ongoing successful operational evaluations from FY22.

FY 2022 to FY 2023 Increase/Decrease Statement:

Funding change reflects planned lifecycle of this effort.

| | | | |
|---|---|-------|---|
| Title: FY2022 SBIR/STTR Transfer | - | 0.316 | - |
|---|---|-------|---|

Description: Funding transferred in accordance with Title 15 USC ?638

FY 2022 Plans:

Funding transferred in accordance with Title 15 USC ?638

FY 2022 to FY 2023 Increase/Decrease Statement:

Funding transferred in accordance with Title 15 USC ?638

| | | | |
|---|-------|-------|-------|
| Accomplishments/Planned Programs Subtotals | 8.205 | 8.649 | 8.933 |
|---|-------|-------|-------|

Congressional Add: Program Increase

FY 2021 Accomplishments: Program Increase supported advanced research on Humanitarian Demining Technologies.

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|--|----------------|----------------|
| | FY 2021 | FY 2022 |
| | 8.485 | 10.351 |

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|--|--|--|

| | FY 2021 | FY 2022 |
|---|---------|---------|
| Work executed by Army Futures Command. | | |
| <i>FY 2022 Plans:</i> Congressional Interest Item funding provided | | |
| Congressional Adds Subtotals | 8.485 | 10.351 |

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

N/A

Remarks

D. Acquisition Strategy

N/A