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| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army | | | | | | | | | | Date: March 2019 | | |
|--|-------------|---------|---------|--------------|---|---------------|---------|---------|---------|------------------|------------------|------------|
| Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 5: System Development & Demonstration (SDD) | | | | | R-1 Program Element (Number/Name) PE 0605034A I Tactical Security System (TSS) | | | | | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| Total Program Element | - | 3.998 | 4.490 | 6.928 | - | 6.928 | 3.057 | 2.013 | 0.000 | 0.000 | 0.000 | 20.486 |
| EQ4: Tactical Security System (TSS) | - | 3.998 | 4.490 | 6.928 | - | 6.928 | 3.057 | 2.013 | 0.000 | 0.000 | 0.000 | 20.486 |

A. Mission Description and Budget Item Justification

The Tactical Security System (TSS) is a modular, scalable, lightweight, rapidly deployable, ground based security and surveillance Family of Systems (FoS). The design of TSS allows for hasty emplacement and is tailorable to support short and long term security, surveillance and detection missions. The TSS and its components are designed to be employed as a stand-alone system, in a layered effort or integrated with additional force protection (FP) systems. Integration with additional sensors will be obtained through network communications and software in line with Net-Ready requirements. TSS will address four of the five base camp core protection/security capabilities identified in the Integrated Base Defense (IBD) Concept of Operations (CONOPS) which are perimeter security, entry control, persistent surveillance, warning and alerting. The TSS will be compliant with the Common Operating Environment (COE) Architecture and Implementation Plan. TSS is designed to be employed as a stand-alone system in a layered effort or integrated with additional force protection systems including motion, acoustic, seismic, surface, and detection technologies.

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|--|-----------------------|-----------------------|----------------------------|---------------------------|-----------------------------|
| <u>B. Program Change Summary (\$ in Millions)</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020 Base</u> | <u>FY 2020 OCO</u> | <u>FY 2020 Total</u> |
| Previous President's Budget | 4.727 | 4.496 | 6.400 | - | 6.400 |
| Current President's Budget | 3.998 | 4.490 | 6.928 | - | 6.928 |
| Total Adjustments | -0.729 | -0.006 | 0.528 | - | 0.528 |
| • Congressional General Reductions | -0.004 | -0.006 | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | -0.540 | - | | | |
| • SBIR/STTR Transfer | -0.185 | - | | | |
| • Adjustments to Budget Years | - | - | 0.528 | - | 0.528 |

Change Summary Explanation

FY 2018 variation due to \$4 thousand for FFRDC Reduction \$185 thousand for SBIR/STTR.

FY 2019 variation due to reduction of \$170 thousand for SBIR/STTR.

Increase to FY 2020 funding is due to an adjustment required to align funding with planned acquisition strategy.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army | | | | | | | | | | Date: March 2019 | | |
| Appropriation/Budget Activity 2040 / 5 | | | | | R-1 Program Element (Number/Name) PE 0605034A / Tactical Security System (TSS) | | | | Project (Number/Name) EQ4 / Tactical Security System (TSS) | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| EQ4: Tactical Security System (TSS) | - | 3.998 | 4.490 | 6.928 | - | 6.928 | 3.057 | 2.013 | 0.000 | 0.000 | 0.000 | 20.486 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | | |
| The TSS is a modular, scalable, lightweight, rapidly deployable, ground based security and surveillance Family of Systems (FoS). The design of TSS allows for hasty emplacement and is tailorable to support short and long term security, surveillance and detection missions. The TSS and its components are designed to be employed as a stand-alone system, in a layered effort or integrated with additional force protection (FP) systems. Integration with additional sensors will be obtained through network communications and software in line with Net-Ready requirements. TSS will address four of the five base camp core protection/security capabilities identified in the Integrated Base Defense (IBD) Concept of Operations (CONOPS) which are perimeter security, entry control, persistent surveillance, warning and alerting. The TSS will be compliant with the Common Operating Environment (COE) Architecture and Implementation Plan. TSS is designed to be employed as a stand-alone system in a layered effort or integrated with additional force protection systems including motion, acoustic, seismic, surface, and detection technologies. | | | | | | | | | | | | |
| FY 2020 Base Funding in the amount of \$6.928 million supports the procurement of three Low Rate Initial Production (LRIP) Articles and conduct of Initial Operational Test and Evaluation (IOT&E). | | | | | | | | | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | FY 2018 | FY 2019 | FY 2020 | |
| Title: TSS Design and Build | | | | | | | | | 3.998 | 4.326 | 6.928 | |
| Description: TSS completes building of Engineering Development Model (EDM), integration with Integrated Ground Security Surveillance and Response Capability (IGSSR-C) and Common Operating Environment (COE), and Developmental Testing (DT) of prototype, achieves Milestone C decision, procures LRIP articles and completes IOT&E. | | | | | | | | | | | | |
| FY 2019 Plans: TSS completes the Critical Design Review (CDR); completes building of the EDM; continues Technical Data Package, Product Support Analysis, and Package development; completes DT; and supports Program Management Office (PMO). | | | | | | | | | | | | |
| FY 2020 Plans: TSS completes the Limited User Testing (LUT) and Logistics Demonstration, achieves Milestone C decision, procures three LRIP articles, and completes IOT&E. | | | | | | | | | | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: Increase to FY 2020 funding is due to an adjustment required to align funding with planned acquisition strategy. | | | | | | | | | | | | |
| Title: FY 2019 SBIR / STTR Transfer | | | | | | | | | - | 0.164 | - | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army | | Date: March 2019 | |
| Appropriation/Budget Activity 2040 / 5 | R-1 Program Element (Number/Name) PE 0605034A / <i>Tactical Security System (TSS)</i> | Project (Number/Name) EQ4 / <i>Tactical Security System (TSS)</i> | |
| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2018 | FY 2019 |
| Description: FY 2019 SBIR / STTR Transfer FY 2019 Plans: FY 2019 SBIR / STTR Transfer FY 2019 to FY 2020 Increase/Decrease Statement: FY 2019 SBIR / STTR Transfer | | | |
| Accomplishments/Planned Programs Subtotals | | 3.998 | 4.490 |
| C. Other Program Funding Summary (\$ in Millions) | | | |
| N/A | | | |
| Remarks | | | |
| D. Acquisition Strategy | | | |
| <p>TSS will eliminate the Non-Standard Equipment (NSE) currently used in the Force Protection Suite (FPS) under the Base Expeditionary Targeting and Surveillance System - Combined (BETSS-C) Quick Reaction Capability (QRC) with improved surveillance capabilities in modular configurations along with enhanced network integration across the command and control system and Common Operating Environment (COE).</p> <p>Tactical Security System (TSS) received Materiel Development Decision (MDD) approval on 6 January 2017. The acquisition concept and contracting strategy for TSS was approved on 30 April 2018 by the Milestone Decision Authority (MDA) to leverage an existing task order through Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, Virginia to provide engineering and developmental support for the TSS design, development, and integration of an EDM and to support Operational Assessments (OA). Key efforts include the development of the EDM, testing and evaluation for TSS Key Performance Parameters (KPPs)/Key System Attributes (KSAs)/Additional Performance Parameters (APAs), and Developmental and Operational Test and Evaluation (DOT&E). MS B was achieved on 29 October 2018.</p> <p>Milestone C is planned for FY 2020.</p> | | | |
| E. Performance Metrics | | | |
| N/A | | | |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army | | | | | | | | | | | | Date: March 2019 | | | |
|--|------------------------|------------------------------------|-------------|---------|------------|--|------------|--------------|------------|--|------------|------------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity 2040 / 5 | | | | | | R-1 Program Element (Number/Name) PE 0605034A / <i>Tactical Security System (TSS)</i> | | | | Project (Number/Name) EQ4 / <i>Tactical Security System (TSS)</i> | | | | | |
| Management Services (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| TSS Project Management | MIPR | PM FPS : Fort Belvoir, VA | 0.020 | 0.516 | | 0.527 | May 2019 | 0.537 | May 2020 | - | | 0.537 | Continuing | Continuing | - |
| Subtotal | | | 0.020 | 0.516 | | 0.527 | | 0.537 | | - | | 0.537 | Continuing | Continuing | N/A |
| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| TSS Design | MIPR | Polaris Alpha : Fredericksburg, VA | 1.000 | 1.874 | | 2.206 | Feb 2019 | 0.217 | Jan 2020 | - | | 0.217 | Continuing | Continuing | Continuing |
| TSS Prototypes | MIPR | Polaris Alpha : Fredericksburg, VA | 1.000 | 0.409 | | 0.759 | Feb 2019 | 3.592 | Jan 2020 | - | | 3.592 | Continuing | Continuing | Continuing |
| TSS Software Development | TBD | MTEQ : Lorton, VA | 0.772 | 0.100 | | - | | - | | - | | - | 0.000 | 0.872 | Continuing |
| TSS Integration | MIPR | Polaris Alpha : Fredericksburg, VA | - | 0.623 | | 0.426 | Feb 2019 | 0.747 | Jan 2020 | - | | 0.747 | Continuing | Continuing | Continuing |
| FY 2019 SBIR / STTR Transfer | TBD | TBD : TBD | - | - | | 0.164 | | - | | - | | - | 0.000 | 0.164 | - |
| Subtotal | | | 2.772 | 3.006 | | 3.555 | | 4.556 | | - | | 4.556 | Continuing | Continuing | N/A |
| Support (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| TSS Design Support | MIPR | RDECOM CERDEC : Fort Belvoir, VA | - | 0.154 | | 0.151 | Feb 2019 | 0.154 | Jan 2020 | - | | 0.154 | Continuing | Continuing | Continuing |
| ARL Human Systems Integration Support | MIPR | US Army Research Lab : Adelphi, MD | - | 0.025 | | 0.031 | Feb 2019 | - | | - | | - | 0.000 | 0.056 | Continuing |
| CECOM FSD - Safety | MIPR | CECOM : APG, MD | - | 0.015 | | 0.015 | Feb 2019 | 0.015 | Nov 2019 | - | | 0.015 | Continuing | Continuing | Continuing |
| Subtotal | | | - | 0.194 | | 0.197 | | 0.169 | | - | | 0.169 | Continuing | Continuing | N/A |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army | | | | | | | | | | | | Date: March 2019 | | | |
| Appropriation/Budget Activity 2040 / 5 | | | | | | R-1 Program Element (Number/Name) PE 0605034A / Tactical Security System (TSS) | | | | Project (Number/Name) EQ4 / Tactical Security System (TSS) | | | | | |
| Test and Evaluation (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| TSS Test and Evaluation | MIPR | Army Evaluation Center : APG, MD | - | 0.282 | | 0.211 | Mar 2019 | 1.666 | Mar 2020 | - | | 1.666 | Continuing | Continuing | Continuing |
| Subtotal | | | - | 0.282 | | 0.211 | | 1.666 | | - | | 1.666 | Continuing | Continuing | N/A |
| | | | Prior Years | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals | | | 2.792 | 3.998 | | 4.490 | | 6.928 | | - | | 6.928 | Continuing | Continuing | N/A |
| Remarks | | | | | | | | | | | | | | | |

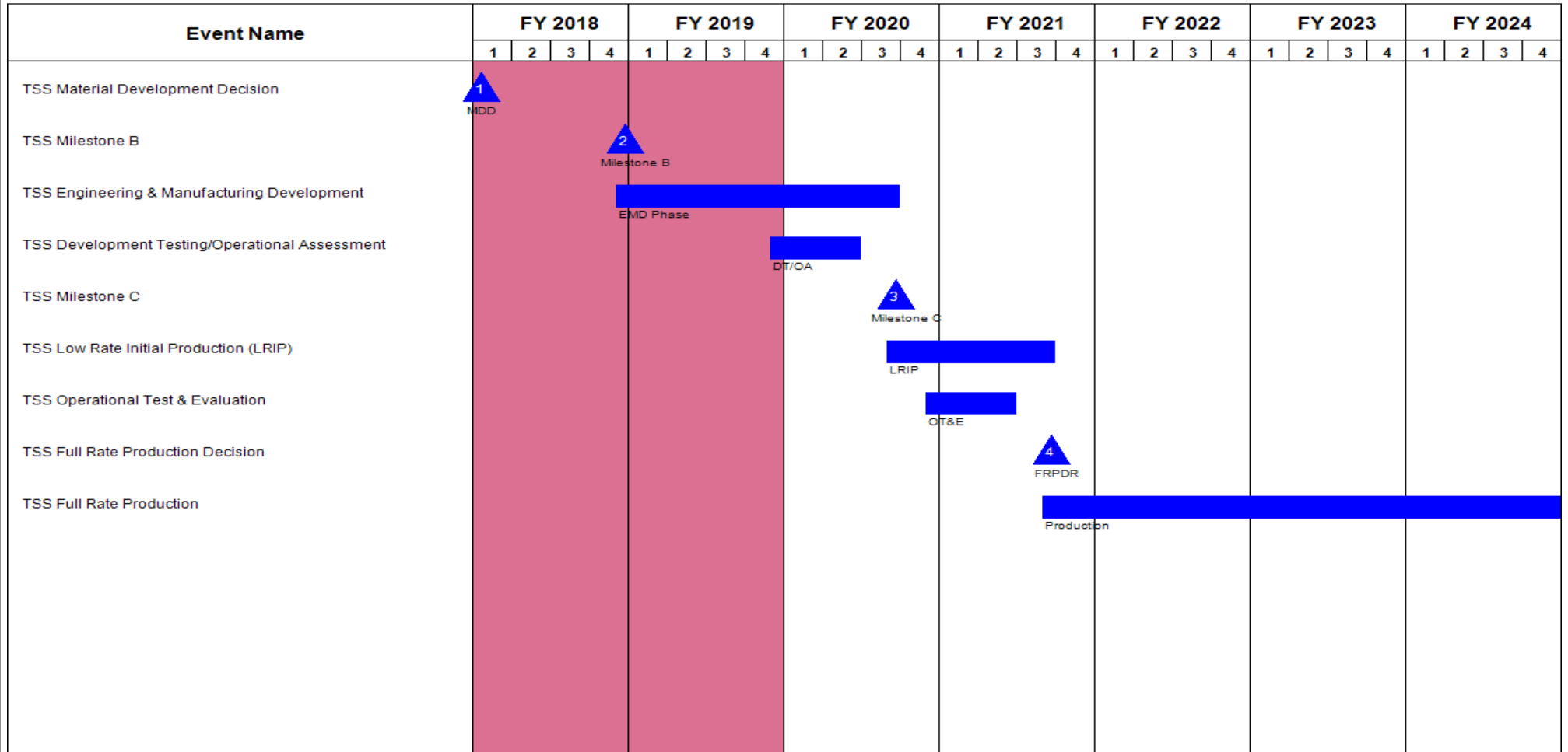
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PE 0605034A: *Tactical Security System (TSS)*
Army

R-1 Line #150

R-1 Program Element (Number/Name)
PE 0605034A / *Tactical Security System*
(TSS)

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|---|---|---|-------------------------|
| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army | | | Date: March 2019 |
| Appropriation/Budget Activity 2040 / 5 | R-1 Program Element (Number/Name) PE 0605034A / <i>Tactical Security System (TSS)</i> | Project (Number/Name) EQ4 / <i>Tactical Security System (TSS)</i> | |

Schedule Details

| Events | Start | | End | |
|---|----------------|-------------|----------------|-------------|
| | Quarter | Year | Quarter | Year |
| TSS Material Development Decision | 1 | 2018 | 1 | 2018 |
| TSS Pre Milestone B Activities / Risk Reduction | 2 | 2016 | 4 | 2017 |
| TSS Milestone B | 4 | 2018 | 4 | 2018 |
| TSS Engineering & Manufacturing Development | 4 | 2018 | 3 | 2020 |
| TSS Development Testing/Operational Assessment | 4 | 2019 | 2 | 2020 |
| TSS Milestone C | 3 | 2020 | 3 | 2020 |
| TSS Low Rate Initial Production (LRIP) | 3 | 2020 | 3 | 2021 |
| TSS Operational Test & Evaluation | 4 | 2020 | 2 | 2021 |
| TSS Full Rate Production Decision | 3 | 2021 | 3 | 2021 |
| TSS Full Rate Production | 3 | 2021 | 4 | 2024 |