

# UNCLASSIFIED

| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army  |             |         |         |              |   |               |         |         |         | Date: March 2019 |                  |            |
|---|-------------|---------|---------|--------------|---|---------------|---------|---------|---------|------------------|------------------|------------|
| Appropriation/Budget Activity<br>2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1208053A I Joint Tactical Ground System |               |         |         |         |                  |                  |            |
| 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   | -           | 10.228  | 7.400   | 10.275       | -   | 10.275        | 9.519   | 9.674   | 7.079   | 12.097           | 0.000            | 66.272     |
| FE7: Joint Tact Grd Station-P3I(MIP)  | -           | 10.228  | 7.400   | 10.275       | -   | 10.275        | 9.519   | 9.674   | 7.079   | 12.097           | 0.000            | 66.272     |

## A. Mission Description and Budget Item Justification

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units, which are deployed in three theaters (PACOM, CENTCOM, EUCOM), constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is used as an institutional trainer though is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor to shooter connectivity.

The JTAGS Program Element (PE) supports development and test to meet JTAGS Operational Requirement(s) Document (ORD) thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). P3I Improvements upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and improves warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 1 is complete. JTAGS Block II Phase 2 activities are broken into three spirals to expedite delivering critical capabilities sooner. Phase 2, Spiral 1 delivers increased sensor capabilities to include, but not limited to processing SBIRS GEO satellite Staring sensor data and additional Highly Elliptical Orbit data. Spiral 2 delivers increased sensor access, communication upgrades, and enhanced training/exercise capabilities (FY2018-19). Spiral 3 delivers software tuning and testing in accordance with the Operational Requirements Document (ORD) (FY2018-21). JROC-Memos 197-12 and 113-13 supports the need to develop and field JTAGS Block II capabilities as soon as possible. Operational Need Statement (ONS) 18-22681 resulted in an Urgent Materiel Release (UMR) approval (13 Apr 18) for the fielding of JTAGS Block II systems, replacing the legacy JTAGS Block I systems. Fielding of the JTAGS Block II Phase 1 systems began in 2018 and is ongoing. Space and Missile Defense Command (SMDC)/Army Strategic Command (ARSTRAT) are developing Capabilities Production Documents (CPDs) to address emerging threats that are already known and future requirements. JTAGS must stay concurrent with any future overhead persistent infrared sensor capabilities to remain relevant and retain resiliency of Teater Event System (TES).

FY 2020 requested funding of \$10.275 million will allow for the continued Spiral 3 software tuning efforts to fully exploit sensor data, evolving cyber hardening advances, emerging threats, and initial planning for 2021 Follow-On Test and Evaluation (FOTE).

**UNCLASSIFIED**

| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Army                                   |         |  |              | Date: March 2019 |               |
|--|---------|--|--------------|------------------|---------------|
| Appropriation/Budget Activity  |         | R-1 Program Element (Number/Name)          |              |                  |               |
| 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development |         | PE 1208053A I Joint Tactical Ground System |              |                  |               |
| B. Program Change Summary (\$ in Millions)   | FY 2018 | FY 2019                                    | FY 2020 Base | FY 2020 OCO      | FY 2020 Total |
| Previous President's Budget  | 10.228  | 7.400                                      | 9.282        | -                | 9.282         |
| Current President's Budget   | 10.228  | 7.400                                      | 10.275       | -                | 10.275        |
| Total Adjustments  | 0.000   | 0.000                                      | 0.993        | -                | 0.993         |
| • Congressional General Reductions   | -       | -  |              |                  |               |
| • Congressional Directed Reductions  | -       | -  |              |                  |               |
| • Congressional Rescissions  | -       | -  |              |                  |               |
| • Congressional Adds   | -       | -  |              |                  |               |
| • Congressional Directed Transfers   | -       | -  |              |                  |               |
| • Reprogrammings   | -       | -  |              |                  |               |
| • SBIR/STTR Transfer   | -       | -  |              |                  |               |
| • Adjustments to Budget Years  | -       | -  | 0.993        | -                | 0.993         |
| <b>Change Summary Explanation</b>  |         |  |              |                  |               |
| In FY 2020, \$0.993 million was added to address evolving cyber hardening efforts.           |         |  |              |                  |               |

**UNCLASSIFIED**

| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army |             |         |         |              |   |               |         |         |  | Date: March 2019 |                  |            |
|---|-------------|---------|---------|--------------|---|---------------|---------|---------|--|------------------|------------------|------------|
| Appropriation/Budget Activity<br>2040 / 7               |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System |               |         |         | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |                  |                  |            |
| 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 |
| FE7: Joint Tact Grd Station-P3I(MIP)                    | -           | 10.228  | 7.400   | 10.275       | -   | 10.275        | 9.519   | 9.674   | 7.079  | 12.097           | 0.000            | 66.272     |
| Quantity of RDT&E Articles                              | -           | -       | -       | -            | -   | -             | -       | -       | -  | -                |                  |            |

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

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades.

JTAGS disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units, which are deployed in three theaters (PACOM, CENTCOM, EUCOM), constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is used as an institutional trainer though is available as a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES), supporting all Theater Missile Defense pillars, affording the shortest sensor to shooter connectivity.

The JTAGS Program Element (PE) supports development and test to meet JTAGS Operational Requirement(s) Document (ORD) thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). P3I Improvements upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and improves warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 1 is complete. JTAGS Block II Phase 2 activities are broken into three spirals to expedite delivering critical capabilities sooner. Phase 2, Spiral 1 delivers increased sensor capabilities to include, but not limited to processing SBIRS GEO satellite Staring sensor data and additional Highly Elliptical Orbit data. Spiral 2 delivers increased sensor access, communication upgrades, and enhanced training/exercise capabilities (FY2018-19). Spiral 3 delivers software tuning and testing in accordance with the Operational Requirements Document (ORD) (FY2018-21). JROC-Memos 197-12 and 113-13 supports the need to develop and field JTAGS Block II capabilities as soon as possible. Operational Need Statement (ONS) 18-22681 resulted in an Urgent Materiel Release (UMR) approval (13 Apr 18) for the fielding of JTAGS Block II systems, replacing the legacy JTAGS Block I systems. Fielding of the JTAGS Block II Phase 1 systems began in 2018 and is ongoing. Space and Missile Defense Command (SMDC)/Army Strategic Command (ARSTRAT) are developing Capabilities Production Documents (CPDs) to address emerging threats that are already known and future requirements. JTAGS must stay concurrent with any future overhead persistent infrared sensor capabilities to remain relevant and retain resiliency of the Theater Event System (TES).

FY 2020 requested funding of \$10.275 million will allow for the continued Spiral 3 software tuning efforts to fully exploit sensor data, evolving cyber hardening advances, emerging threats, and initial planning for 2021 Follow-On Test and Evaluation (FOTE).

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

|   | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> JTAGS Test and Evaluation Support | 1.616          | 1.083          | 1.024          |

## UNCLASSIFIED

|   |   |  |         |         |
|---|---|--|---------|---------|
| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army   |   | Date: March 2019   |         |         |
| Appropriation/Budget Activity<br>2040 / 7   | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |         |         |
| B. Accomplishments/Planned Programs (\$ in Millions)  |   | FY 2018  | FY 2019 | FY 2020 |
| <p><b>Description:</b> Test and evaluation support for the JTAGS P3I Block II program</p> <p><b>FY 2019 Plans:</b><br/>Will complete testing support of the JTAGS P3I Block II Phase 2 Spiral 2 development program</p> <p><b>FY 2020 Plans:</b><br/>Post Limited User Test (LUT) analysis and reporting. Supporting developmental testing for JTAGS Block II Phase 2 Spiral 3 tuning efforts. Begin planning JTAGS FOTE planned for FY21</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b><br/>Projected FY19 to FY20 funding of the JTAGS Test and Evaluation program will decrease slightly. FY19 effort will finish a Limited User Test (LUT), while FY20 efforts will be post-LUT analysis/reporting and beginning to plan for FOT&amp;E support projected to taker place in FY21.</p>   |   |  |         |         |
| <p><b>Title:</b> JTAGS Block II Phase 2</p> <p><b>Description:</b> JTAGS Block II Phase 2 activities are broken into three spirals to expedite getting critical capabilities fielded sooner. Spiral 1 delivers stereo SBIRS Geosynchronous staring sensor capabilities and SBIRS HEO Pseudo-Link 4 (P/L 4) data. Spiral 2 delivers Cobra Brass and "Walkers" data and Missile Defense System Exerciser (MDSE) capabilities (FY2018-19). Spiral 3 delivers software tuning and testing to the Operational Requirements Document (ORD) (FY2018-21). JROC-Memos 197-12 and 113-13 supports the need to develop and field JTAGS Block II capabilities as soon as possible Also includes Government management/oversight of the JTAGS Block II program.</p> <p><b>FY 2019 Plans:</b><br/>Will continue development efforts of the JTAGS Block II Phase 2 Spiral 2 program. Also covers some Government management/oversight.</p> <p><b>FY 2020 Plans:</b><br/>Will continue development efforts of the JTAGS Block II Phase 2 Spiral 3 program which focuses on software tuning efforts to fully optimize sensor data, and evolving cyber hardening advances. Also covers some Government management/oversight.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b><br/>Program was increased to address evolving cyber hardening efforts.</p> |   | 8.612  | 6.317   | 9.251   |
| Accomplishments/Planned Programs Subtotals  |   | 10.228   | 7.400   | 10.275  |

# UNCLASSIFIED

|  |         |         |                 |   |                  |         |         |  |         |                     |            |
|--|---------|---------|-----------------|---|------------------|---------|---------|--|---------|---------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2020 Army  |         |         |                 |   |                  |         |         |  |         | Date: March 2019    |            |
| Appropriation/Budget Activity<br>2040 / 7  |         |         |                 | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System |                  |         |         | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |         |                     |            |
| C. Other Program Funding Summary (\$ in Millions)  |         |         |                 |   |                  |         |         |  |         |                     |            |
| Line Item  | FY 2018 | FY 2019 | FY 2020<br>Base | FY 2020<br>OCO  | FY 2020<br>Total | FY 2021 | FY 2022 | FY 2023  | FY 2024 | Cost To<br>Complete | Total Cost |
| • BZ8420: JOINT<br>TACTICAL GROUND<br>STATION MODS (JTAGS)   | -       | 5.434   | 0.000           | -   | 0.000            | -       | -       | 6.393  | -       | 0.000               | 11.827     |
| Remarks  |         |         |                 |   |                  |         |         |  |         |                     |            |
| D. Acquisition Strategy  |         |         |                 |   |                  |         |         |  |         |                     |            |
| <p>This program element develops critical software intensive improvements, while continuing to make maximum use of Non-Developmental Items (NDI)/Commercial Off-The-Shelf (COTS) components and Government Furnished Equipment (GFE). After design and integration, the system will be subject to thorough developmental and validation/verification testing to verify performance, operational effectiveness and suitability. P3I Improvements will upgrade JTAGS to a new Block II configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, improving warning tactical parameters and timeliness. JTAGS Block II is on contract for a two-Phase development effort. JTAGS Block II Phase 2 is further divided into three spirals to provide critical capabilities to fielded units faster. Spiral 1 delivers stereo SBIRS Geosynchronous staring sensor capabilities and SBIRS Highly Elliptical Orbit (HEO) Pseudo-Link 4 (P/L 4) data. Spiral 2 delivers Cobra Brass and "Walkers" data, and Missile Defense System Exerciser (MDSE) capabilities (FY2018-19). Spiral 3 delivers software tuning and testing in accordance with the Operational Requirements Document (ORD) (FY2018-21). JTAGS Block II Phase 2 is a Cost Plus Incentive Fee (CPIF) option on the JTAGS Block II (P3I) contract (W9113M-12-C-0055). The option was definitized 4Q17. JROC-Memos 197-12 and 113-13 direct fielding of JTAGS Block II capabilities as soon as possible.</p> |         |         |                 |   |                  |         |         |  |         |                     |            |
| E. Performance Metrics   |         |         |                 |   |                  |         |         |  |         |                     |            |
| N/A  |         |         |                 |   |                  |         |         |  |         |                     |            |

**UNCLASSIFIED**

|  |                        |  |             |         |            |   |            |              |            |  |            |                  |                  |            |                          |
|--|------------------------|--|-------------|---------|------------|---|------------|--------------|------------|--|------------|------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Army |                        |  |             |         |            |   |            |              |            |  |            | Date: March 2019 |                  |            |                          |
| Appropriation/Budget Activity<br>2040 / 7              |                        |  |             |         |            | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System |            |              |            | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |            |                  |                  |            |                          |
| 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 |
| Government Program Management                          | Allot                  | Various : Redstone Arsenal AL          | -           | 2.689   | Oct 2017   | 1.190   | Oct 2018   | 1.161        | Oct 2019   | -  |            | 1.161            | Continuing       | Continuing | -                        |
| Subtotal   |                        |  | -           | 2.689   |            | 1.190   |            | 1.161        |            | -  |            | 1.161            | 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 |
| JTAGS P3I Block II Phase 2 Development                 | Option/ CPIF           | Northrop Grumman : Colorado Springs Co | -           | 4.590   | Dec 2017   | 3.749   | Dec 2018   | 6.713        | Dec 2019   | -  |            | 6.713            | Continuing       | Continuing | -                        |
| Subtotal   |                        |  | -           | 4.590   |            | 3.749   |            | 6.713        |            | -  |            | 6.713            | 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 |
| Contractor Engineering Support                         | C/CPFF                 | TBD : Huntsville AL                    | -           | 1.333   | Dec 2017   | 1.378   | Nov 2018   | 1.377        | Feb 2020   | -  |            | 1.377            | Continuing       | Continuing | -                        |
| Subtotal   |                        |  | -           | 1.333   |            | 1.378   |            | 1.377        |            | -  |            | 1.377            | Continuing       | Continuing | N/A                      |
| 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 |
| Test Support (ATEC/AIC/ JITC)                          | Various                | Various : Various                      | -           | 1.616   | Dec 2017   | 1.083   | Dec 2018   | 1.024        | Dec 2019   | -  |            | 1.024            | Continuing       | Continuing | -                        |
| Subtotal   |                        |  | -           | 1.616   |            | 1.083   |            | 1.024        |            | -  |            | 1.024            | Continuing       | Continuing | N/A                      |

**UNCLASSIFIED**

|   |                    |                |  |                |   |                     |  |                    |  |  |                         |                   |                                 |
|---|--------------------|----------------|--|----------------|---|---------------------|--|--------------------|--|--|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2020 Army |                    |                |  |                |   |                     |  |                    |  | <b>Date:</b> March 2019  |                         |                   |                                 |
| <b>Appropriation/Budget Activity</b><br>2040 / 7                  |                    |                |  |                | <b>R-1 Program Element (Number/Name)</b><br>PE 1208053A / <i>Joint Tactical Ground System</i> |                     |  |                    |  | <b>Project (Number/Name)</b><br>FE7 / <i>Joint Tact Grd Station-P3I(MIP)</i> |                         |                   |                                 |
|   | <b>Prior Years</b> | <b>FY 2018</b> |  | <b>FY 2019</b> |   | <b>FY 2020 Base</b> |  | <b>FY 2020 OCO</b> |  | <b>FY 2020 Total</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Project Cost Totals</b>  | -                  | 10.228         |  | 7.400          |   | 10.275              |  | -                  |  | 10.275   | Continuing              | Continuing        | N/A                             |
| <b>Remarks</b>  |                    |                |  |                |   |                     |  |                    |  |  |                         |                   |                                 |

UNCLASSIFIED

|   |   |  |                  |
|---|---|--|------------------|
| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Army |   |  | Date: March 2019 |
| Appropriation/Budget Activity<br>2040 / 7         | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |                  |

| Event Name  | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   | FY 2022 |   |   |   | FY 2023 |   |   |   | FY 2024 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|   | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| JTAGS P3I Block II Phase 2                                      |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Mod program                                  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 1 (Starer, P/L4)              |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 1                             |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 2 (Cobra Brass and Slow Wal   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 2                             |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 3 (tuning and testing to ORD) |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| JTAGS P3I Block II Phase 2 Spiral 3                             |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Future Sensor Integration and Technology Refresh                |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Future Sensor Integration                                       |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |



UNCLASSIFIED

|  |   |  |                  |
|--|---|--|------------------|
| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Army |   |  | Date: March 2019 |
| Appropriation/Budget Activity<br>2040 / 7          | R-1 Program Element (Number/Name)<br>PE 1208053A / Joint Tactical Ground System | Project (Number/Name)<br>FE7 / Joint Tact Grd Station-P3I(MIP) |                  |

Schedule Details

| Events   | Start   |      | End     |      |
|--|---------|------|---------|------|
|  | Quarter | Year | Quarter | Year |
| JTAGS P3I Block II Phase 2   | 4       | 2015 | 4       | 2021 |
| JTAGS P3I Block II Phase 2 Spiral 1 (Starer, P/L4)                 | 4       | 2015 | 4       | 2019 |
| JTAGS P3I Block II Phase 2 Spiral 2 (Cobra Brass and Slow Walkers) | 4       | 2017 | 4       | 2019 |
| JTAGS P3I Block II Phase 2 Spiral 3 (tuning and testing to ORD)    | 3       | 2018 | 3       | 2021 |
| Future Sensor Integration and Technology Refresh                   | 1       | 2022 | 4       | 2024 |