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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

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| Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development | R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs |
|--|--|

| COST (\$ in Millions) | Prior Years | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total | FY 2018 | FY 2019 | FY 2020 | FY 2021 | Cost To Complete | Total Cost |
|-----------------------|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 40.468 | 35.951 | 7.491 | - | 7.491 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| DZ9: ATACMS Mods | - | 40.468 | 35.951 | 7.491 | - | 7.491 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Army Tactical Missile Systems (ATACMS) is the United States (U.S.) Army's primary 24/7, all-weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. This effort will not build any new missiles or add to the overall inventory. Block (Blk) 1 missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). Starting with a Blk 1 missile, this modification effort will integrate, test, and qualify an ATACMS configuration to include a policy compliant WH, obsolescence refresh, and re-grained rocket motors. A characterization effort will also be performed to include qualification and flight testing to assess ATACMS performance with inclusion of a proximity sensor. Additional efforts include launcher updates to enable firing of the new ATACMS configuration.

| B. Program Change Summary (\$ in Millions) | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 38.323 | 35.951 | 7.592 | - | 7.592 |
| Current President's Budget | 40.468 | 35.951 | 7.491 | - | 7.491 |
| Total Adjustments | 2.145 | 0.000 | -0.101 | - | -0.101 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | 3.603 | - | | | |
| • SBIR/STTR Transfer | -1.458 | - | | | |
| • Adjustments to Budget Years | - | - | -0.101 | - | -0.101 |

Change Summary Explanation

FY2015 funding includes Omnibus reprogramming in the amount of \$3.603 million OCO to Project 045 - Hellfire Product Improvement Program in support of Operational Need Statement (ONS #15-20273) to modify the AGM-114L Longbow Hellfire missile.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army **Date:** February 2016

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| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs | Project (Number/Name) DZ9 / ATACMS Mods |
|--|--|---|

| COST (\$ in Millions) | Prior Years | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total | FY 2018 | FY 2019 | FY 2020 | FY 2021 | Cost To Complete | Total Cost |
|----------------------------|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| DZ9: ATACMS Mods | - | 40.468 | 35.951 | 7.491 | - | 7.491 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

Army Tactical Missile Systems (ATACMS) is the United States (U.S.) Army's primary 24/7, all-weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. This effort will not build any new missiles or add to the overall inventory. Block (Blk) 1 missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). Starting with a Blk 1 missile, this modification effort will integrate, test, and qualify an ATACMS configuration to include a policy compliant WH, obsolescence refresh, and re-grained rocket motors. A characterization effort will also be performed to include qualification and flight testing to assess ATACMS performance with inclusion of a proximity sensor. Additional efforts include launcher updates to enable firing of the new ATACMS configuration.

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

| | FY 2015 | FY 2016 | FY 2017 |
|--|---------|---------|---------|
| Title: Conduct Development Engineering, Design Component Testing, and Performance Analysis. | 40.468 | 35.951 | 7.491 |
| Description: Funding is provided for the following effort | | | |
| FY 2015 Accomplishments: Conducted Development Engineering to address obsolescence and proximity sensor integration, Design Component Testing, and Performance Analysis. | | | |
| FY 2016 Plans: Completion of component hardware build up and integration into completed missiles. Performance Analysis to include ground and flight testing. | | | |
| FY 2017 Plans: Completion of the ground and flight testing | | | |
| Accomplishments/Planned Programs Subtotals | 40.468 | 35.951 | 7.491 |

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

| Line Item | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total | FY 2018 | FY 2019 | FY 2020 | FY 2021 | Cost To Complete | Total Cost |
|--|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| • ATACMS MODS: ATACMS MODS (CA6700) | - | 20.119 | 150.043 | - | 150.043 | 62.668 | 16.217 | - | - | 0.000 | 249.047 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2017 Army | | Date: February 2016 |
| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i> | Project (Number/Name) DZ9 / <i>ATACMS Mods</i> |

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

| <u>Line Item</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> <u>Base</u> | <u>FY 2017</u> <u>OCO</u> | <u>FY 2017</u> <u>Total</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
|------------------|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
|------------------|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|

Remarks

D. Acquisition Strategy

The ATACMS MOD program will qualify a new configuration needed to support follow-on production in order to maintain critical inventory levels. ATACMS MOD will be integrated and tested under a Cost Plus Fixed Fee (CPFF) contract to Lockheed Martin Missile and Fire Control System (LMMFCS).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army **Date:** February 2016

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| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs | Project (Number/Name) DZ9 / ATACMS Mods |
|--|--|---|

| Management Services (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Government Program Management | TBD | PFRMS Project Office, : RSA | 4.380 | 3.944 | Oct 2014 | 4.203 | Oct 2015 | 1.243 | Oct 2016 | - | | 1.243 | 0 | 13.770 | 0 |
| Subtotal | | | 4.380 | 3.944 | | 4.203 | | 1.243 | | - | | 1.243 | 0.000 | 13.770 | 0.000 |

Remarks
PFRMS-Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal; TBD-To Be Determined

| Product Development (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| ATACMS Mods Contracts | SS/CPFF | LMMFCS : (Dallas, TX) | 37.757 | 19.610 | Aug 2015 | 20.645 | Jan 2016 | 4.154 | Jan 2017 | - | | 4.154 | 0 | 82.166 | 0 |
| Other Government Agencies | TBD | AMCOM/AMRDEC, : RSA | 4.475 | 1.253 | Dec 2014 | 1.708 | Dec 2015 | 0.093 | Dec 2016 | - | | 0.093 | 0 | 7.529 | 0 |
| Subtotal | | | 42.232 | 20.863 | | 22.353 | | 4.247 | | - | | 4.247 | 0.000 | 89.695 | 0.000 |

Remarks
ATACMS-Army Tactical Missile System; Mods-Modifications; CPFF-Cost Plus Fixed Fee; LMMFCS-Lockheed Martin Missile and Fire Control; TX-Texas; TBD-To Be Determined; AMCOM-Army Materiel Command; AMRDEC-U.S. Army Research, Development and Engineering Command; RSA-Redstone Arsenal, Alabama

| Support (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------------------|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Support Contract | C/CPFF | Various : Various | 0.839 | 0.922 | Dec 2014 | 1.223 | Dec 2015 | 0.549 | Dec 2016 | - | | 0.549 | 0 | 3.533 | 0 |
| Subtotal | | | 0.839 | 0.922 | | 1.223 | | 0.549 | | - | | 0.549 | 0.000 | 3.533 | 0.000 |

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army **Date:** February 2016

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|--|--|---|

| Test and Evaluation (\$ in Millions) | | | | FY 2015 | | FY 2016 | | FY 2017 Base | | FY 2017 OCO | | FY 2017 Total | Cost To Complete | Total Cost | Target Value of Contract |
|--------------------------------------|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Test Support | TBD | WSMR, NM; : RTC, AL | 12.554 | 14.739 | Dec 2014 | 8.172 | Dec 2015 | 1.452 | Dec 2016 | - | | 1.452 | 0 | 36.917 | 0 |
| Subtotal | | | 12.554 | 14.739 | | 8.172 | | 1.452 | | - | | 1.452 | 0.000 | 36.917 | 0.000 |

Remarks
WSMR, NM-White Sands Missile Range, New Mexico; RTC, AL-Redstone Test Center, Alabama; TBD-To Be Determined

| | Prior Years | FY 2015 | FY 2016 | FY 2017 Base | FY 2017 OCO | FY 2017 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|-------------|---------|---------|--------------|-------------|---------------|------------------|------------|--------------------------|
| Project Cost Totals | 60.005 | 40.468 | 35.951 | 7.491 | - | 7.491 | 0.000 | 143.915 | 0.000 |

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

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| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs | Project (Number/Name) DZ9 / ATACMS Mods |
|--|--|---|

| Event Name | FY 2015 | | | | FY 2016 | | | | FY 2017 | | | | FY 2018 | | | | FY 2019 | | | | FY 2020 | | | | FY 2021 | | | |
|--|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| | 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 |
| Development Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (1) Integration and Testing Contract Award | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct Arena Warhead Tests | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Procure Flight Termination Systems | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Proximity Sensor Characterization | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Obsolescence | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Component Build Up and Performance Analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sub Component Hardware Build Up | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Missiles Integration, Assembly, and Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ground/Flight Tests | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army | | Date: February 2016 |
| Appropriation/Budget Activity 2040 / 7 | R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i> | Project (Number/Name) DZ9 / <i>ATACMS Mods</i> |

Schedule Details

| Events | Start | | End | |
|--|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Development Engineering | 3 | 2014 | 4 | 2017 |
| Integration and Testing Contract Award | 1 | 2015 | 1 | 2015 |
| Conduct Arena Warhead Tests | 4 | 2014 | 2 | 2015 |
| Procure Flight Termination Systems | 3 | 2014 | 2 | 2016 |
| Proximity Sensor Characterization | 4 | 2014 | 4 | 2017 |
| Obsolescence | 3 | 2014 | 4 | 2016 |
| Component Build Up and Performance Analysis | 1 | 2015 | 3 | 2017 |
| Sub Component Hardware Build Up | 1 | 2015 | 3 | 2016 |
| Missiles Integration, Assembly, and Deliveries | 3 | 2016 | 1 | 2017 |
| Ground/Flight Tests | 3 | 2016 | 3 | 2017 |

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