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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	420.839	290.076	316.929	-	316.929	313.212	338.353	249.475	279.758	Continuing	Continuing
MD07: <i>THAAD</i>	398.748	276.291	229.869	-	229.869	218.373	250.200	198.752	192.538	Continuing	Continuing
MT07: <i>THAAD Test</i>	-	-	70.928	-	70.928	78.573	70.546	37.201	71.791	Continuing	Continuing
MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>	1.128	1.230	1.145	-	1.145	1.103	1.121	1.236	1.260	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	20.963	12.555	14.987	-	14.987	15.163	16.486	12.286	14.169	Continuing	Continuing

Note

N/A

A. Mission Description and Budget Item Justification

The Terminal Defense PE includes the Terminal High Altitude Area Defense (THAAD) development program, support of PATRIOT Advanced Capability-3 (PAC-3) participation in Missile Defense Agency activities, and Program Wide Support.

The THAAD element provides the only air transportable, fast reacting capability for the warfighter to provide area coverage against Short and Medium Range Ballistic Missiles within four hours of arrival. The THAAD element includes five major components: Interceptors, Launchers, Army Navy/Transportable Radar Surveillance - Type 2 (AN/TPY-2) Radars, THAAD Fire Control and Communication (TFCC), and THAAD-Peculiar Support Equipment. THAAD delivered Battery #1 in FY 2009 and Battery #2 in FY 2010 to the U.S. Army at Ft. Bliss, TX for initial fielding and training.

PATRIOT Advanced Capability (PAC 3) is an U.S. Army short range Ballistic Missile Defense System (BMDS) that interfaces with the BMDS. MDA funds PATRIOT participation in BMDS interoperability integration efforts.

THAAD has completed the development of the THAAD 1.0 configuration and will develop the THAAD Build 2.0 capability. Continued development and integration will provide for enhanced debris mitigation and interoperability with other BMDS elements.

Testing with other BMDS elements (including BMDS Command Control / Battle Management and Communication (C2BMC), PATRIOT and Aegis) will demonstrate integrated mission execution and provides flexibility to rapidly augment the stationary BMDS assets in the global Phased Adaptive Approach.

Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of MDA functions and activities across the entire BMDS.

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	436.482	290.452	318.745	-	318.745
Current President's Budget	420.839	290.076	316.929	-	316.929
Total Adjustments	-15.643	-0.376	-1.816	-	-1.816
• Congressional General Reductions	-2.935	-0.376			
• Congressional Directed Reductions	-5.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-7.708	-			
• Other Adjustment	-	-	-1.816	-	-1.816

Change Summary Explanation

- FY 2011 decrease of \$15.643M reflects Congressional General Reduction (\$2.935M) and Congressional Directed Reductions (\$5.000M) (Department of Defense and Full Year Continuing Appropriation Act, FY 2011 (Public Law 112-10)) and SBIR/STTR transfer (\$7.708M).
- FY 2012 decrease of \$0.376M reflects a Congressional General Reduction (Consolidated Appropriation Act of FY 2012 (Public Law 112-74)).
- FY 2013 decrease of \$1.816M reflects a realignment of Department of Defense priorities.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD07: <i>THAAD</i>	398.748	276.291	229.869	-	229.869	218.373	250.200	198.752	192.538	Continuing	Continuing
Quantity of RDT&E Articles	11	38	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

THAAD Baseline Capability Development (BCD) (THAAD 1.0) provides the fundamental capability against short and medium-range Ballistic Missiles and asymmetric threats inside and outside the atmosphere. Remaining work scope includes: 1) Ground and Flight Test the weapon system against complex Re-entry Vehicles (RV), background clutter, and Medium-Range Ballistic Missile (MRBM) threats; 2) Ground and Flight Test the initial Discrimination Capability; 3) Provide enhanced communication capability to support Link 16 compatibility with the Ballistic Missile Defense System (BMDS) and engagement coordination with other BMDS elements.

THAAD Advanced Capability Development (ACD) (THAAD 2.0) expands the capability of THAAD 1.0 system by 2018. New THAAD capabilities include: 1) Launch on Link 16 Track providing the ability to initiate an engagement and launch THAAD interceptors using sensor data provided by BMDS sources outside the THAAD Battery; 2) Improving THAAD Weapons System performance in the presence of a high debris environment; 3) Expanding the defended area footprints by remote operation of THAAD Launchers; 4) Peer-to-peer engagement coordination with Aegis and Patriot weapon systems; 5) Software upgrades to maintain capability against evolving threats; and 6) Message based regional engagement command functionality to process message content from Command and Control/Battle Management and Communications (C2BMC) to obtain direction for target engagement.

THAAD supports fielded software through Post Deployment Software Support (PDSS). PDSS enhancements will include: 1) Information Assurance mandatory updates; 2) Warfighter requested corrections and enhancements; and 3) Upgrades to maintain interface with other BMDS software builds.

Through FY 2011, THAAD provided logistical support to field, operate, maintain, repair and replenish the weapon system. Beginning in FY 2012, these costs are resourced with O&M funding.

MDA Engineering integrates element development, test, and Modeling and Simulation work to optimize the capability of the BMDS.

THAAD provides institutional and unit training devices to support U.S. Army requirements for CONUS and OCONUS deployments based on the System Training Plan (STRAP).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Weapon Sys Engr Integ & Test (WSEIT)	72.371	98.084	171.433
Articles:	0	38	0

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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Description: See Description Below

FY 2011 Accomplishments:

Weapon System Engineering Integration & Test (WSEIT) performs all engineering efforts required to translate approved Ballistic Missile Defense System (BMDS) requirements into THAAD requirements, incorporates those requirements into a THAAD design and capability, and verifies and validates THAAD capability. Activities include coordination and requirements analysis, system integration, software engineering to include independent verification and validation, configuration management, integration of the THAAD components into the THAAD element, and BMDS integration of the THAAD element. THAAD WSEIT performs risk management, system security, and information assurance. THAAD WSEIT updates THAAD interface specifications and interface control documents for required BMDS changes.

-Conducted pre-flight testing (trajectory, debris, nominal and tolerance scenario analyses) in the System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) facility for Flight Test THAAD (FTT)-12 (IOT&E) (THAAD Dual Simultaneous Intercept Flight Test against Short Range Ballistic Missile Targets) and FTO-01 (Integrated THAAD / PATRIOT / Aegis Flight test against three simultaneous targets) to ensure mission range and public safety; and to generate system performance predictions for post mission comparison

-Completed Element Verification of THAAD initial capability to verify weapon system meets THAAD System Specification
-Integrated and implemented THAAD and its components in the BMDS through participation in MDA Ground Test Campaign and Combatant Commander (COCOM) wargames, and exercises, and Performance Assessments to ensure THAAD interoperability with BMDS

-Demonstrated THAAD communications with Command and Control/Battle Management and Communications (C2BMC) and Aegis Ballistic Missile Defense over Extremely High Frequency (EHF) Satellite Communications (SATCOM) during flight testing at Flight Test Sea-Based X-Band Radar (FTX)-17, Flight Test Standard Missile (FTM)-16 and FTT-12 (IOT&E)

-Developed requirements and conducted preliminary design reviews for the Post Deployment Software Support (PDSS) builds for each THAAD component to ensure continued performance and operation of fielded Batteries

-Completed resolution process for correlation issues involving Link-16 Tracks to enhance engagement coordination for interoperability with BMDS

-Executed Reliability Confidence Testing and analysis to support reliability growth to meet U.S. Army requirements in support of THAAD Materiel Release

FY 2012 Plans:

Plans include scope that was previously documented in MD07 THAAD accomplishments/plans: System Engineering, THAAD Fire Control and Communication, Launcher, Interceptor, and Batteries #1 and #2.

	FY 2011	FY 2012	FY 2013

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011		
<ul style="list-style-type: none"> -Deliver 38 Interceptors for Batteries #1 and #2 that were purchased with FY 2007 through FY 2012 funds -Continue to support BMDS C2BMC in the integration of Extremely High Frequency (EHF) and Super High Frequency (SHF) communications capabilities into the THAAD weapon system -Continue in the design, development, qualification testing, release, field, and support incremental release of PDSS builds for each THAAD component -Continue the development of automated test tools for PDSS activities -Continue to provide real-time closed loop system and component testing utilizing THAAD hardware-in-the-loop (HWIL) facilities -Demonstrate THAAD's ability to interoperate with Aegis, AN/TPY-2, C2BMC, and PATRIOT in a live fire test -Conduct pre-mission analysis of THAAD performance in FTI-01 and FTO-01, operational scenarios testing THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with C2BMC and forward-based AN/TPY-2. Analysis ensures mission range and public safety and generates system performance predictions for post mission comparison. -Conduct analysis of Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data collected during flight testing -Determine impacts to Joint data link standard MIL-STD-3011 by assessing interoperability capabilities of THAAD system, concept of operations, and developed Software (S/W) -Continue development of Netted Embedded Training to enable THAAD Battery participation in common training scenarios, near real time with other THAAD Batteries, lower tier units, other elements of the Ballistic Missile Defense System (BMDS) (through Distributed Multi-Echelon Training Systems) -Continue to develop, maintain, and integrate THAAD Integrated Simulation and Tactical Software (ISTS) into BMDS digital framework and conduct Verification, Validation and Accreditation (VV&A) for Simulation-Over-Live-Driver (SOLD), ISTS at the THAAD Evaluation Center (TEC) HWIL facility -Continue Models and Simulations (M&S) development to support Element and BMDS events including all Integrated Master Test Plan (IMTP) M&S related activities to include System Pre Mission Tests (SPMTs) and System Post Flight Reconstruction (SPFRs) -Update THAAD interface specifications and interface control documents for required BMDS changes -Conduct threat assessments of the BMDS Adversary Development Package (ADP) -Continue THAAD interoperability planning with joint and coalition planning systems -Complete Ignition System Safety Review Board (ISSRB) testing of optical block re-design -Implement Mandatory Information Assurance Updates and perform Information Assurance Vulnerability Assessments (IAVA) on all THAAD component software -Initiate THAAD Build 2.0 development of non-organic intercept debris mitigation -Rehost, test, and qualify new Launcher Operating System to minimize Information Assurance vulnerabilities <p>FY 2013 Plans:</p> <ul style="list-style-type: none"> -Continue THAAD Build 2.0 development of non-organic intercept debris mitigation 						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Conduct post-mission analysis of THAAD performance in FTI-01, an operational scenario testing THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with C2BMC and forward-based AN/TPY-2</p> <p>-Continue pre-mission analysis for FTO-01, an operational scenario further testing THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with C2BMC and forward-based AN/TPY-2. Analysis ensures mission range and public safety and generates system performance predictions for post mission comparison.</p> <p>-Continue integration and implementation of THAAD and its components in the BMDS through participation in MDA Ground Test Campaign and Performance Assessments to evaluate system performance and interoperability within the integrated BMDS</p> <p>-Continue integration and implementation of THAAD and its components in the BMDS through participation in Combatant Commander (COCOM) wargames and exercises</p> <p>-Design, develop, qualification test, release, and field annual release of Post Deployment Software Support (PDSS) to ensure continued performance and operation of fielded Batteries</p> <p>-Implement Mandatory Information Assurance Updates and perform Information Assurance Vulnerability Assessments (IAVA) to mitigate potential system vulnerabilities and to ensure continued performance and operation of fielded Batteries</p> <p>-Develop software updates for Simulation-Over-Live Driver (SOLD) to enable testing and training of mass raid scenarios on tactical hardware and integrate into Ballistic Missile Defense System (BMDS) flight test and ground test campaign</p> <p>-Provide technical and business management support activities, financial management, cost and schedule performance analysis, cost estimation and analysis, and integration activities to ensure effective use of appropriated resources</p> <p>-Provide contractor program management, and subcontract management to ensure effective use of appropriated resources</p> <p>-Execute Terminal High Altitude Area Defense program in compliance with internal and external direction, policies, and regulations to ensure effective use of appropriated resources</p> <p>-Provide technical and business support in the negotiation and award of the Battery contracts</p> <p>-Conduct Integrated Baseline Reviews to ensure prime contractor's baseline cost, schedule, and risk aligned with THAAD project office requirements</p> <p>Variance Analysis: Increase from FY 2011 to FY 2012 caused by movement of scope from System Engineering, THAAD Fire Control and Communication, Launcher, and Interceptor to this budget activity. Increase from FY 2012 to FY 2013 includes scope to initiate THAAD Build 2.0 software and hardware and incorporation of the Integrated Master Test Plan.</p>				
<p>Title: THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs)</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p>		13.829 0	- 0	- 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>The THAAD Fire Control and Communication (TFCC) is composed of two Tactical Station Groups (TSGs). Each TSG consists of a Tactical Operations Station, a Launch Control Station, and a Station Support Group. The TFCC serves as the interface with the Ballistic Missile Defense System (BMDS) and provides planning, control, coordination, execution, and communications of the THAAD weapon system.</p> <p>-Conducted TEMPEST Testing, using implemented hardware updates, to correct known vulnerabilities identified in previous TEMPEST test events</p> <p>-Developed Extremely High Frequency Warfighter Information Network - Tactical (WIN-T/EHF) upgrade to enable THAAD's connection to updated Army Signal Corps assets, as well as provide a more survivable, higher speed satellite connection to Aegis and Command and Control/Battle Management and Communications (C2BMC), enabling the development of enhanced engagement concepts</p> <p>-Continued assembly of four EHF WIN-T Modification Kits for the Battery #1 and #2 Tactical Station Groups to enable THAAD's connection to updated Army Signal Corps assets</p> <p>-Continued EHF WIN-T Modification Kits for two Tactical Test Beds in order to maintain tactical configuration in the labs to support fielded Batteries</p> <p>-Initiated Netted Embedded Training to enable THAAD Battery participation in common training scenarios, near real time with other THAAD Batteries, lower tier units, other elements of the BMDS (through Distributed Multi-Echelon Training System)</p> <p>-Implemented Post Deployment Software Support (PDSS) Planning and Analysis to incorporate THAAD Fire Control and Communication (TFCC) Soldier requested capabilities, software change requests, and improved interoperability by mitigating Track ID proliferation issues between THAAD and AEGIS BMD via Link 16</p> <p>-Updated TFCC software for use in Reliability Confidence Testing to meet U.S. Army reliability requirements</p> <p>FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test and System Test.</p> <p>FY 2013 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test and System Test.</p>				
Title: Launcher		7.594	-	-
		Articles: 0	0	0
Description: See Description Below				
FY 2011 Accomplishments:				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>The THAAD Launcher consists of a U.S. Army M1120 Heavy Expanded Mobility Tactical Truck-Load Handling System variant that transports an integrated missile round pallet and supports and secures eight ready-to-launch interceptors.</p> <p>-Completed redesign of obsolete launcher components and qualification testing to ensure the Launcher met performance requirements</p> <p>-Updated Launcher software for use in Reliability Confidence Testing to meet U.S. Army reliability requirements</p> <p>-Supported verification of THAAD Launcher capability to meet requirements from the THAAD System Specification and THAAD Launcher Prime Item Development Specification</p> <p>-Completed Launcher rail impact test to ensure the weapon system to validate weapon system safety parameters</p> <p>FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test and System Test.</p> <p>FY 2013 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test and System Test.</p>				
<p>Title: System Test</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: THAAD System Test conducts Ballistic Missile Defense System (BMDS) Flight Test, Ground Test, Mission Planning, Performance Assessment, Systems Analysis, and Range Safety analysis in accordance with BMDS Integrated Master Test Plan (IMTP). THAAD System Test coordinates with Operational Test Agencies (OTAs), conducts flight test operations, performs post-flight test analysis and reporting, and performs data distribution and data storage at Pacific Missile Range Facility (PMRF). Defines and interprets THAAD target requirements and assesses proposed target solutions for flight test program. THAAD System Test also conducts lethality assessments of the THAAD system.</p> <p>-Completed the Flight Test THAAD (FTT)-12 Initial Operational Test and Evaluation (IOT&E) to demonstrate near Simultaneous Engagement of a Mid-Endo Separating Target and a High-Endo Non-Separating Target. Additional objectives include: Demonstration of integrated Radar, Launcher, THAAD Fire Control and Communications (TFCC) and Interceptor closed loop operations, engagement functions, and high off-boresight Mid-Endo intercept of a separating target and High-Endo intercept of non-separating target; Demonstration of Interceptor endgame capability for targets intercept; Demonstration of acquisition, track</p>		<p>Articles:</p> <p>69.547 0</p>	<p>99.299 0</p>	<p>- 0</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
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<p>and aim-point selection by the Interceptors seeker; and Demonstration of Link 16 Interoperability with 94th Army Air and Missile Defense Command (AAMDC) and Command and Control Battle Management and Communications (C2BMC).</p> <ul style="list-style-type: none"> -Conducted Insensitive Munitions/Final Hazard Classification (IM/FHC) testing to verify system compliance with safety standards. Testing included Fast Cook-off, Slow Cook-off, Drop Test, Bullet Impact and Fragment Impact testing of Interceptor configuration with Thermal Initiated Venting System (TIVS) to ensure safe transportation of Interceptor with TIVS in a Missile Round Pallet (MRP) and Single Missile Round Transport Container (SMRTC) -Completed Hot and Cold Full Spectrum Missile Safety Testing (MST) on two missile rounds at Redstone Test Center (RTC) to support issuance of a safety confirmation statement for THAAD fielding -Completed Government Ground Testing (GGT) to ensure the weapon system can be operated/shipped in all environments -Completed Battery Support Center Deployable Rapid Assembly Shelter (DRASH) regression rail impact test to validate weapon system safety parameters -Completed Launcher rail impact test to validate weapon system safety parameters <p>FY 2012 Plans: Plans include scope that was previously documented in MD07 THAAD plans/accomplishments: THAAD Fire Control and Communication, Launcher, and Interceptor.</p> <ul style="list-style-type: none"> -Support Flight Test, Ground Test, Mission Planning, Performance Assessment, Systems Analysis, and Range Safety analysis in accordance with Integrated Master Test Plan -Continue flight test planning, range interface, coordination with Operational Test Agencies (OTAs) and execution of flight test operations at Reagan Test Site (RTS) for FTI-01 (Ballistic Missile Defense System (BMDS) Integration Flight Test) demonstrating in an operational scenario THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with BMDS Command and Control / Battle Management and Communications (C2BMC) and forward-based AN/TPY-2 -Continue flight test planning, range interface, coordination with Operational Test Agencies (OTAs) at Reagan Test Site (RTS) for FTO-01 (BMDS Operational Flight Test) to further demonstrate in an operational scenario THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with C2BMC and forward-based AN/TPY-2 -Support planning and execution of BMDS interoperability exercises and overlays -Continue to provide pre-mission planning, pre and post mission analysis, reporting support, and execution to BMDS Ground Test campaigns -Provide data management, facilities operations, and post-test analysis and reporting support in support of BMDS System Tests -Monitor targets design, development, delivery, and execution to support flight test program -Support pre-flight testing in the System Integration Laboratory (SIL) Hardware-in-the-Loop (HWIL) facility 			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Conduct JITC and Army certification testing to support incremental release of Post Deployment Software Support (PDSS) builds for THAAD Fire Control & Communication (TFCC)</p> <p>-Collect and analyze Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) data from flight testing</p> <p>-Onsite range support for THAAD component maintenance, repair and fueling</p> <p>FY 2013 Plans: Plans for this scope are included in MT07 THAAD accomplishments/plans: System Test.</p> <p>Title: Integrated Logistics Support (ILS)</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Provides each THAAD component with all aspects of logistics support. Responsible for transportability of all THAAD system equipment and ensuring the required Government Furnished Equipment (GFE) is available as required by contract. Additionally, works with the user in developing all aspects of training for the components and has a key role in the fielding of the THAAD System to the Army.</p> <p>-Completed New Equipment Training (NET) for Battery #2 to instruct the warfighter on individual soldier tasks and to prepare the warfighter for Unit Collective Training with the tactical hardware</p> <p>-Initiated production of a Mobile Training Device (MTD) to support New Equipment Training (NET) for multiple hardware and software configurations</p> <p>-Initiated Unit Collective Training for Battery #2 to support Battery Commander led training and assessment</p> <p>-Completed 8 Single Missile Round Transport Containers (SMRTC) for transport of Interceptors from Troy, AL Interceptor final assembly building</p> <p>-Procured and emplaced 36 Missile Round Dolly Sets at Anniston Army Depot (ANAD) to allow for the movement and storage of Interceptors at ANAD</p> <p>-Initiated development for Institutional Conduct of Fire Trainer (ICOFT) and THAAD Tabletop Trainer for Institutional Training Base to support U.S. Army requirements for CONUS and OCONUS deployments based on the System Training Plan (STRAP).</p> <p>-Executed Reliability Confidence Testing and analysis to support reliability growth to meet U.S. Army requirements in support of THAAD Materiel Release</p> <p>FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Maintenance, Training and Transportation.</p> <p>FY 2013 Plans:</p>		11.522	-	-
Articles:		0	0	0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Plans for this scope are included in MD07 THAAD accomplishments/plans: Maintenance, Training and Transportation.				
<p>Title: Interceptor</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: The THAAD Interceptor is a certified round that is propelled by a single-stage, solid-propellant rocket booster. The kill vehicle (KV) possesses a Divert and Attitude Control System (DACS) and an infrared Seeker used to destroy its target through hit-to-kill technology.</p> <ul style="list-style-type: none"> -Provided interceptors for Insensitive Munitions/Final Hazard Classification (IM/FHC) testing -Conducted the qualification testing of the Flight Sequencing Assemblies, Optical Blocks, and Automated Test Consoles to prove compliance with MIL-STD-331 requirements -Completed Optical Block and Flight Sequencing Assembly (FSA) design changes to satisfy Ignition System Safety Review Board (ISSRB) requirement -Inspected and refurbished Flight Test Vehicle and installed Range Safety Instrumentation System (RSIS) components to support flight testing -Conducted stockpile reliability test program and development of the Missile Stockpile Test Set (MSTS) to meet U.S. Army requirements -Initiated the procurement of additional Range Safety Instrumentation Safety (RSIS) kits to modify tactical missiles with range safety capability for flight testing -Completed Interceptor Block Qualification Testing (BQT) to validate weapon system safety parameters <p>FY 2012 Plans: Plans for this scope are now included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test and System Test (WSEIT).</p> <p>FY 2013 Plans: Plans for this scope are now included in MD07 THAAD accomplishments/plans: WSEIT and System Test.</p>		<p>23.545</p> <p>Articles: 0</p>	<p>-</p> <p>0</p>	<p>-</p> <p>0</p>
<p>Title: Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments:</p>		<p>12.331</p> <p>Articles: 0</p>	<p>-</p> <p>0</p>	<p>-</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>The AN/TPY-2 (THAAD Mode) Radar is a solid state, phased array radar capable of tracking multiple threats and multiple interceptors during engagements. The radar utilizes fence, volume, and cued search modes, and provides surveillance, acquisition, track, discrimination, interceptor communications, and hit assessment data collection for the fire control. The radar hardware is a transportable system composed of the Antenna Equipment Unit, Electronics Equipment Unit, Cooling Equipment Unit, and the Prime Power Unit (PPU).</p> <p>-Supported the Initial Operational Test and Evaluation (IOT&E) THAAD FTT-12 (THAAD Intercept Flight Test). This soldier led test consisted of dual simultaneous engagement of two short range Ballistic Missile targets</p> <p>-Provided Radar software for use in Reliability Confidence Testing to meet U.S. Army reliability requirements</p> <p>-Supported verification of Radar capability to meet requirements from the THAAD System Specification and Radar Prime Item Development Specification</p> <p>FY 2012 Plans: These plans are now in the Sensor Program Element (0603884C), budget project MD11.</p> <p>FY 2013 Plans: These plans are now in the Sensor Program Element (0603884C), budget project MD11.</p>				
<p>Title: Batteries #1 and #2</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Batteries #1 and #2 will include a basic load of 48 Interceptors, six Launchers (1 provided by the development contract), two Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) (THAAD Mode) Radars (provided by Sensors Directorate), 4 THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) (2 provided by the development contract), the required Peculiar and Common Support Equipment, and two Interceptors for flight test (provided to development contract). Delivery of Battery hardware began in FY 2009.</p> <p>-Delivered 10 Interceptors and 1 flight test vehicle</p> <p>FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test</p> <p>FY 2013 Plans:</p>		<p>87.929</p> <p>Articles: 11</p>	<p>-</p> <p>0</p>	<p>-</p> <p>0</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>		PROJECT MD07: <i>THAAD</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
None.				
<p>Title: Sustainment</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: THAAD provides logistical support to field, operate, maintain, repair and replenish the THAAD weapon system as it fielded to the Army. Contractor Logistics Support (CLS) technicians are responsible for maintenance and supply chain management of the required spares and repair parts. THAAD provides engineering support services and software maintenance support. The Operations & Sustainment Support associated with the Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radars allocated to THAAD Batteries are provided for under the Sensors Program Element.</p> <p>-Designed, developed, conducted qualification testing, released, and fielded Post Deployment Software Support (PDSS) builds for each THAAD component -Procured replenishment spares for fielded hardware to maintain Battery operational capability -Provided Preventive Maintenance Check and Service for THAAD Battery #1 and #2 hardware to ensure continued performance and operation of fielded Batteries -Initiated Batteries #1 and #2 Replacement Training Pilot courses to maintain Battery operational capability after soldier rotations.</p> <p>FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Maintenance, Training and Transportation, and Operation & Maintenance.</p> <p>FY 2013 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: Maintenance, Training and Transportation, and Operation & Maintenance.</p>		62.065 0	- 0	- 0
<p>Title: Program Management</p> <p align="right">Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: Program Management provides strategic planning, program integration, cost estimating, contracting, and financial management for the THAAD Program Office. In addition, THAAD Program Management prepares financial statements, conducts internal</p>		14.300 0	- 0	- 0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>review and audit, performs earned-value management, performs program assessments, and is responsible for all aspects of risk management for the THAAD program.</p> <p>-Provided technical and business management support activities, financial management, cost and schedule performance analysis cost estimation and analysis, and integration activities to ensure effective use of appropriated resources</p> <p>-Provided contractor program management, and subcontract management, to ensure effective use of appropriated resources</p> <p>-Executed Terminal High Altitude Area Defense program in compliance with internal and external direction, policies, and regulations to ensure effective use of appropriated resources</p> <p>-Provided technical and business support in the negotiation and award of the Battery #3 & #4 contract</p> <p>-Conducted Integrated Baseline Reviews to ensure prime contractor's baseline cost, schedule, and risk aligned with THAAD project office requirements</p> <p>FY 2012 Plans: FY 2012 activities are included in Procurement documents.</p> <p>FY 2013 Plans: FY 2013 activities are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test.</p>				
<p>Title: Modeling and Simulations</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: The THAAD element will support the Ballistic Missile Defense System (BMDS) Hardware-in-the-Loop (HWIL) and Digital Modeling and Simulation Program by providing and integrating into the BMDS system-level HWIL single stimulation framework (SSF) and system-level Digital Simulation Architecture (DSA) framework to support full-envelope BMDS performance assessment, ground test, flight test, and training events based upon Agency, OTA, DOT&E, and warfighter needs. BMDS HWIL provides development, integration, and test funding to both MDA and non-MDA Elements participating in the BMDS digital simulation events and ground test campaigns. BMDS Digital Modeling and Simulation and HWIL also provides the core Lethality and Phenomenology models for use in analysis and BMDS and Element mission requirements. BMDS HWIL additionally maintains the Advanced Research Center and Simulation Center High Performance Computing Capabilities to support test and Modeling and Simulation (M&S) requirements across MDA.</p> <p>-Developed, integrated, and tested a common BMDS HWIL stimulation framework with the Elements for the Ground Test, Integrated-04 (GTI-04), Ground Test, Distributed (GTD-04) ground tests</p>		<p>23.715</p> <p>Articles: 0</p>	<p>7.113</p> <p>0</p>	<p>-</p> <p>0</p>

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<ul style="list-style-type: none"> -Conducted BMDS HWIL stimulation framework Verification and Validation (V&V) for BMDS Ground Test Integrated (GTI)-04 and Ground Test Distributed (GTD)-04 ground tests -Defined and planned for enhancement to the Single Stimulation Framework (SSF) required for execution of the GT-05 campaign to include identification of interdependencies required for execution -Provided Development, Operations and Maintenance, and Independent V&V of standardized phenomenology and lethality tools and models for the common environmental toolset -Evolved and enhanced the SSF to provide increased Warfighter support, specifically Training and Exercises; Integrate the SSF with additional Allied/Coalition elements to expand Distributed Ground Test and Exercise venues; Initiate the technical integration of the SSF with the Digital Stimulation Architecture -Product Line development, sustainment, maintenance and product support for HWIL products -Planned, developed, integrated and tested a common BMDS Hardware-in-the-Loop (HWIL) stimulation framework with the Elements for GTI, GTD ground tests, Active Layered Theatre Ballistic Missile Defense (ALTBMD) exercises, Assured Response (AR) exercises, Foreign Exercises, Near-Term Discrimination (NTD) excursions tests, and Concurrent Test, Training, and Operations (CTTO) demos -Conducted Ballistic Missile Defense System (BMDS) HWIL stimulation framework V&V for BMDS GTX, GTI, GTD ground tests, ALTBMD exercises, Assured Response (AR) exercises, Foreign Exercises, and Concurrent Test, Training and Operations (CTTO) demos -Provided systems engineering support to upgrade the BMDS stimulation framework to support wide band debris for BMDS sensors -Initiated integration of the BMDS stimulation framework with the additional sensors; provided common threat representations and scenarios to meet specific event and customer requirements for BMDS HWIL Framework -Developed and delivered releases of M&S digital products: Digital Simulation Architecture framework for use in Technical Assessments; Missile Defense Space-warning Tool (MDST) for use in Technical Assessments and Warfighter Exercises; BMD International Simulation for use in International virtual BMD demonstrations, BMD education, and Warfighter wargames -Integrated, tested, functionally qualified, and delivered BMDS constructive Performance Assessment Simulation (utilizing DSA and MDST) to support full-envelope BMDS performance assessment for Technical Assessments -Continued software operations/maintenance of the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter exercises -Provided software support for PATRIOT System Effectiveness Model (PSEM) for use in Technical Assessments -Provided transitional DSA framework/modeling support to Command and Control/Battle Management and Communications (C2BMC) software Spiral Testing for MDA's release of C2BMC v8.x development 			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>-Procured, installed and maintained Performance Assessment Simulation ensembles for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>FY 2012 Plans:</p> <p>-Develop and deliver major releases of M&S digital products: Digital Simulation Architecture framework for use in Performance Assessment as part of the CD04 Operational Test, real-time venues including Warfighter Exercises, Warfighter Training, C2BMC software Spiral Testing for MDA's release of C2BMC v8.x development, and Ground Test campaign; Missile Defense Space Warning Tool (models validated space-borne assets of BMDS) for use in Performance Assessments and Warfighter Exercises; BMD International Simulation for use in International virtual BMD demonstrations, BMD education, and Warfighter wargames</p> <p>-Integrate, test, functionally qualify, and deliver end-to-end BMDS simulations supporting various uses: Performance Assessment Simulation (utilizing DSA, MDST, and Element-provided high-resolution models) to support full-envelope BMDS performance assessment for Performance Assessment events; Real-time Digital Simulation (utilizing DSA, MDST, and Element-provided medium-resolution models) to support Warfighter Exercises, Warfighter Training, Element spiral development, and Ground Test campaign</p> <p>-Operate and maintain software of the Extended Air Defense Simulation (EADSIM) code base for use in Warfighter Exercises</p> <p>-Provide software support for PATRIOT System Effectiveness Model (PSEM) for use in Performance Assessment events</p> <p>-Control and maintain Performance Assessment Simulation ``ensembles`` for Element M&S development laboratory use in the Digital M&S Integration Center (DMIC) in Huntsville, AL</p> <p>FY 2013 Plans:</p> <p>FY 2013 activities are included in MD07 THAAD accomplishments/plans: Weapon System Engineering Integration & Test (WSEIT).</p>				
<p>Title: Maintenance, Training and Transportation</p> <p>Articles:</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: All FY 2011 activities are funded in MD07 THAAD accomplishments/plans: Integrated Logistic Support and Sustainment.</p> <p>FY 2012 Plans: Plans include scope that was previously documented in MD07 THAAD accomplishments/plans: Integrated Logistics Support.</p> <p>This activity provides maintenance and transportation for each THAAD component and to ensure that Government Furnished Equipment (GFE) is available when required. It develops and maintains THAAD training programs and equipment and conducts training for THAAD Battery fielding. This activity develops the THAAD Objective Supportability Strategy that includes Depot</p>		-	49.956	51.040
		0	0	0

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Maintenance Support Plan, Level of Repair Analysis, Core Logistics Assessment, Performance Base Agreement, Core Depot Assessment and Source of Repair Analysis, Depot Maintenance Study, and the Demilitarization/Disposal Plan.</p> <p>-The THAAD embedded Army Hybrid Cell is the staff and Internal Operating Budget that perform/execute the scope of the Maintenance, Training and Transportation activity; they are a separate staff from the Program Office Operations. It is composed of combined MDA and Army personnel providing Doctrine, Training, Leadership, Organization, Materiel, Soldier (DTLOMS) support for the THAAD system. The Hybrid Cell provides technical guidance, financial management, cost and schedule performance analysis, cost estimation and analysis, integration activities, and sub-contract management to ensure effective use of appropriated resources</p> <p>-Provide supportability planning & analysis, training oversight, peculiar support equipment, transportation controls, deployment and sustainment support</p> <p>-Complete Collective Training for Battery #2</p> <p>-Continue to plan for THAAD New Equipment Training (NET) and Collective Training for Batteries 3 through 6</p> <p>-Continue to plan for replacement training in support of fielded systems</p> <p>-Provide maintenance support on multiple hardware and software configurations of THAAD components</p> <p>-Continue maintenance, operations and transportation in support of the THAAD development</p> <p>-Continue production of Institutional Conduct for Fire Trainer (ICOFT)</p> <p>-Complete design and initiate production of Radar March Order & Emplacement Trainer (MOET)</p> <p>-Initiate design and production of Table Top Trainer (TT3)</p> <p>-Continue support of Army requirement for additional training devices For Institutional Training Base (ITB) based on update to System Training Plan (STRAP)</p> <p>FY 2013 Plans:</p> <p>-The THAAD embedded Army Hybrid Cell is composed of combined MDA and Army personnel providing Doctrine, Training, Leadership, Organization, Materiel, Soldier (DTLOMS) support for the THAAD system. The Hybrid Cell provides technical guidance, financial management, cost and schedule performance analysis, cost estimation and analysis, integration activities, and sub-contract management to ensure effective use of appropriated resources</p> <p>-Continue Launcher and Radar Embedded Training (ET) development to provide a capability to maintain soldier proficiency in the classroom and in fielded Batteries</p> <p>-Continue development for Institutional Conduct of Fire Trainer (ICOFT) for Institutional Training Base to maintain Battery operational capability after soldier rotations</p> <p>-Continue development of Radar March Order & Emplacement Trainer (RMOET) for Institutional Training Base to maintain Battery operational capability after soldier rotations</p> <p>-Complete production of Table Top Trainer (TT3)</p>				

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>-Initiate spares procurement for Institutional Training Base (ITB) to maintain training devices</p> <p>-Refurbish one Launcher and one Launcher MOET for Institutional Training Base (ITB) to maintain Battery operational capability after soldier rotations</p> <p>-Complete the development of a System Level Interactive Electronic Technical Manual (IETM) for Battery Training to maintain warfighter proficiency</p> <p>Variance Analysis: Increase from FY 2011 to FY 2012 caused by creation of this budget activity to incorporate Integrated Logistic Support and Sustainment. Increase from FY 2012 to FY 2013 due to sustainment of a larger number of fielded assets.</p>			
<p>Title: Project Redwood- Details at a Higher Classification</p> <p>Description: See Description Below</p> <p>FY 2011 Accomplishments: N/A</p> <p>FY 2012 Plans: This project is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress.</p> <p>FY 2013 Plans: This project is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress.</p>	Articles: -	21.839	7.396
	0	0	0
Accomplishments/Planned Programs Subtotals	398.748	276.291	229.869

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M: <i>BMD Operations and Maintenance</i>	0.000	202.758	259.975		259.975	297.549	330.851	338.460	350.522	Continuing	Continuing
• Procurement: <i>THAAD Procurement</i>	0.000	709.150	460.728		460.728	565.938	447.427	490.197	463.739	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	MD07: <i>THAAD</i>

D. Acquisition Strategy

The planned acquisition strategy for Advance Capability Development (ACD) activities is for modification to the existing Development contract, award of ACD base contract in FY 2011, and award of an Engineering Services Task Order in FY 2012. The program is posturing for potential competitive awards of select components. Continuation of a Sole Source Task Order Delivery Order Contract for Field Support and Contractor Logistics Support is included.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Weapon Sys Engr Integ & Test (WSEIT) Lockheed Martin 14	SS/CPAF	LMSSC:Sunnyvale, CA; Huntsville, AL	134.165	73.211	Feb 2012	48.985	Nov 2012	-		48.985	Continuing	Continuing	Continuing
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) LMSSC and Raytheon	SS/CPAF	LMSSC and Raytheon:Huntsville, AL	90.256	-		-		-		-	0.000	90.256	0.000
Launcher Lockheed Martin 15	SS/CPAF	LMSSC:Huntsville, AL	31.401	-		-		-		-	0.000	31.401	0.000
Integrated Logistics Support (ILS) Lockheed Martin 17	SS/CPAF	LMSSC/Sunnyvale, CA:Huntsville, AL	79.812	-		-		-		-	0.000	79.812	0.000
Interceptor Lockheed Martin 18	SS/CPAF	LMSSC:CA/ TX,AL,MA,NH,IL,FL & MD	178.237	-		-		-		-	0.000	178.237	0.000
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar Lockheed Martin 19	SS/CPAF	Raytheon:Bedford, MA	294.251	-		-		-		-	0.000	294.251	0.000
Batteries #1 and #2 Lockheed Martin 20	SS/CPIF	LMSSC:Sunnyvale, CA; Huntsville, AL; NM & HI	634.318	-		-		-		-	0.000	634.318	0.000
Batteries #1 and #2 Raytheon	SS/CPIF	Raytheon :Woburn, MA; Huntsville, AL	56.000	-		-		-		-	0.000	56.000	0.000
Sustainment Lockheed Martin 21	SS/CPIF	LMSSC and Raytheon:CA/ TX,AL,MA,NH,IL,FL & MD	156.952	-		-		-		-	0.000	156.952	0.000
Program Management Lockheed Martin 15	SS/CPAF	LMSSC:Sunnyvale, CA; Huntsville, AL	66.846	-		-		-		-	0.000	66.846	0.000
Modeling and Simulations Teledyne Brown Eng	SS/CPAF	THAAD, Huntsville, AL:Huntsville, AL	47.235	7.113	Nov 2011	-		-		-	0.000	54.348	0.000
Subtotal			1,769.473	80.324		48.985		-		48.985			

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense</i> <i>Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Weapon Sys Engr Integ & Test (WSEIT) Contract Support Services (CSS) 1	C/FFP	Dynetics, BAE & L3:Huntsville, AL & Salt Lake City, UT	36.811	13.641	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) Other Government Agencies (OGA) 1	MIPR	RDEC :Huntsville, AL	63.056	5.477	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) MDA Program Support 1	MIPR	MDA:Arlington, VA/ Huntsville, AL	46.225	5.755	Nov 2011	61.473	Nov 2012	-		61.473	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) Advanced Capability Development	SS/IDIQ	LMSSC:Sunnyvale, CA/ Huntsville, AL	-	-		38.934	Nov 2012	-		38.934	Continuing	Continuing	Continuing
Weapon Sys Engr Integ & Test (WSEIT) Models & Simulations	MIPR	US Army US Army AMRDEC:Huntsville, AL	-	-		22.041	Nov 2012	-		22.041	Continuing	Continuing	Continuing
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) Contract Support Services 2	C/FFP	Dynetics, DCD, & Davidson Tech:Silver Spring, MD & Huntsville, AL	5.499	-		-		-		-	0.000	5.499	0.000
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) Other Government Agencies 2	MIPR	NRDEC, RDEC :Natick, MA & Huntsville, AL	4.603	-		-		-		-	0.000	4.603	0.000
THAAD Fire Control and Communication (TFCC) Tactical Station Groups (TSGs) MDA Program Support 2	Various	MDA:Arlington, VA	15.865	-		-		-		-	0.000	15.865	0.000
Launcher Contract Support Services (CSS) 3	C/FFP	Teledyne Solutions:Huntsville, AL	3.514	-		-		-		-	0.000	3.514	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Launcher Other Government Agencies 3	MIPR	RDEC :Huntsville, AL	3.602	-		-		-		-	0.000	3.602	0.000
Launcher MDA Program Support 3	Various	MDA:Huntsville, AL	8.488	-		-		-		-	0.000	8.488	0.000
System Test Contract Support Services (CSS)	C/CPFF	Multiple to include Dynetics, L3 & TSI:Huntsville, AL	56.600	-		-		-		-	0.000	56.600	0.000
System Test Other Government Agency (OGA)	MIPR	Multiple to include WSMR, PMRF, ATEC, RDEC & SMDC:NM, HI, VA & Huntsville, AL	208.366	-		-		-		-	0.000	208.366	0.000
System Test MDA Program Support	Various	MDA:Arlington, VA	31.445	3.300	Nov 2011	-		-		-	0.000	34.745	0.000
Integrated Logistics Support (ILS) Contract Support Services 5	C/FFP	Dynetics, TST.BAE:Huntsville, AL; & Rockville, MD	23.585	-		-		-		-	0.000	23.585	0.000
Integrated Logistics Support (ILS) Other Government Agencies 5	MIPR	IMMC & USAADASCH:Huntsville, AL; & Fort Bliss, TX	22.649	-		-		-		-	0.000	22.649	0.000
Integrated Logistics Support (ILS) MDA Program Support 15	MIPR	CECOM, TACOM, GSA, RDEC & SMDC:Ft. Monmouth, NJ; Warren, MI & Huntsville, AL	4.570	-		-		-		-	0.000	4.570	0.000
Interceptor Contract Support Services (CSS) 6	C/FFP	Dynetics & GA Tech:Huntsville, AL & GA	22.386	-		-		-		-	0.000	22.386	0.000
Interceptor Other Government Agencies 6	MIPR	RDEC & SMDC:Huntsville, AL	19.035	-		-		-		-	0.000	19.035	0.000
Interceptor MDA Program Support 5	Various	MDA:Huntsville, AL	7.463	-		-		-		-	0.000	7.463	0.000
Army Navy/Transportable Radar Surveillance - Model	Various	MDA:Arlington, VA	4.208	-		-		-		-	0.000	4.208	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
2 (AN/TPY-2) Radar MDA Program Support 6													
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar Other Government Agency	MIPR	Multiple to include CECOM, RDEC & SMDC:Ft. Monmouth, NJ & Huntsville, AL	1.598	-		-		-		-	0.000	1.598	0.000
Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) Radar Contract Support Services	C/CPFF	Multiple to include Dynetics & GA Tech:Huntsville, AL & GA	2.367	-		-		-		-	0.000	2.367	0.000
Batteries #1 and #2 GFE	MIPR	Multiple to include CECOM, TACOM, GSA, RDEC & :Ft. Monmouth, NJ; Warren, MI & Huntsville, AL	1.945	-		-		-		-	0.000	1.945	0.000
Sustainment GFE	MIPR	Multiple to include CECOM, TACOM, GSA, RDEC & SMDC:Huntsville, AL	0.424	-		-		-		-	0.000	0.424	0.000
Program Management Contract Support Services 4	C/FFP	Dynetics, BAE & Tecolote:Huntsville, AL	17.801	-		-		-		-	0.000	17.801	0.000
Program Management Other Government Agencies 4	MIPR	IMMC & USAADASCH:Huntsville, AL & Fort Bliss, TX	6.215	-		-		-		-	0.000	6.215	0.000
Program Management MDA Program Support 4	Various	MDA:Arlington, VA	9.494	-		-		-		-	0.000	9.494	0.000
Maintenance, Training and Transportation Lockheed Martin 30	SS/CPAF	LMSSC:Sunnyvale, CA/ Huntsville, AL	-	31.000	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Maintenance, Training and Transportation Other Government Agency	MIPR	RDEC:Huntsville,AL/ FT Bliss, TX	-	16.900	Nov 2011	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Maintenance, Training and Transportation MDA Program Support 10	Various	MDA:Huntsville, AL	-	2.056	Nov 2011	7.899	Nov 2012	-		7.899	Continuing	Continuing	Continuing
Maintenance, Training and Transportation Maintenance, Training, Transportation and Operations Support	Various	LMSSC:Sunnyvale, CA/ Huntsville, AL	-	-		35.231	Nov 2012	-		35.231	Continuing	Continuing	Continuing
Maintenance, Training and Transportation Army Cell to Hybrid Program Office	MIPR	Integrated Material Management Center, AMCOM:Huntsville, AL	-	-		7.910	Nov 2012	-		7.910	Continuing	Continuing	Continuing
Project Redwood- Details at a Higher Classification Special Programs	SS/FP	N/A:N/A	-	21.839	Oct 2011	7.396	Oct 2012	-		7.396	Continuing	Continuing	Continuing
Subtotal			627.814	99.968		180.884		-		180.884			

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test Flight Test Planning, Analysis, and Execution	Various	LMSSC:Sunnyvale, CA/ Huntsville, AL	82.457	95.999	Nov 2011	-		-		-	0.000	178.456	0.000
System Test Flight Test Range Infrastructure/ Execution	MIPR	Pacific Missile Range Facilities:Kauai, HI	-	-		-		-		-	0.000	0.000	0.000
System Test Flight Test Support and Planning	Various	MDA:Ft. Belvoir, VA/ Huntsville, AL	-	-		-		-		-	0.000	0.000	0.000
System Test BMDs Ground Testing	MIPR	US Army AMRDEC:Huntsville, AL	-	-		-		-		-	0.000	0.000	0.000
Subtotal			82.457	95.999		-		-		-	0.000	178.456	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>
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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks
N/A

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		2,479.744	276.291		229.869		-	229.869			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD07: <i>THAAD</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
THAAD System B1 S/W Formal Release	1	2011	1	2011
Block Qualification Test (BQT) Completion	2	2011	2	2011
Advanced Capability Development Contract Award	2	2011	2	2011
Insensitive Munitions/Hazards Confidence Testing	2	2011	3	2011
Interceptor Block Qualification Test-2	2	2011	2	2011
Element Weapon System Verification	4	2011	4	2011
Battery #1 8th Interceptor Delivery	4	2011	4	2011
Interceptors (2) Deliver for FTT-12 (THAAD Intercept Flight Test)	4	2011	4	2011
Conduct FTT-12 (THAAD Dual Simultaneous Intercept Flight Test)	4	2011	4	2011
Battery #1 Interceptor Deliveries Complete	1	2012	1	2012
Battery #2 Interceptor Deliveries Complete	3	2012	3	2012
Advanced Capability Development Element Requirements Review (ERR)	4	2012	4	2012
Conduct FTI-01 (GMD/Aegis/THAAD/PATRIOT Multiple Integration Flight Test)	4	2012	4	2012
Advanced Capability Development Element Design Review (EDR)	1	2014	1	2014
Complete Institutional Conduct of Fire trainer (ICOFT)	4	2014	4	2014
Complete Institutional Training Devices	2	2015	2	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MT07: <i>THAAD Test</i>	-	-	70.928	-	70.928	78.573	70.546	37.201	71.791	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

THAAD System Test conducts Ballistic Missile Defense System (BMDS) Flight Test and Ground Test, and Mission Planning in accordance with BMDS Integrated Master Test Plan. THAAD System Test coordinates with Operational Test Agencies, conducts flight test operations, performs post-flight test analysis and reporting, and performs data distribution and data storage at Pacific Missile Range Facility and the Reagan Test Site.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: System Test	-	-	70.928
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: Accomplishments for this scope are included in MD07 THAAD accomplishments/plans: System Test.			
FY 2012 Plans: Plans for this scope are included in MD07 THAAD accomplishments/plans: System Test.			
FY 2013 Plans: -Continue flight test planning, range interface, coordination with Operational Test Agencies (OTAs) and execution of flight test operations at Reagan Test Site (RTS) for FTO-01 (BMDS Operational Flight Test) to further demonstrate in an operational scenario THAAD's ability to conduct coordinated engagements with Aegis and PATRIOT operating with BMDS Command Control / Battle Management and Communications (C2BMC) and forward-based AN/TPY-2 -Conduct THAAD participation in MDA Ground Test Campaign and Combatant Commander (COCOM) war games, and exercises, as well as Performance Assessments to evaluate system performance and interoperability within the integrated BMDS			
Variance Analysis: Changes from FY 2012 (MD07) to FY 2013 (MT07) due to incorporation of Integrated Master Test Plan.			
Accomplishments/Planned Programs Subtotals	-	-	70.928

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M: <i>BMD Operations and Maintenance</i>	0.000	202.758	259.975		259.975	297.549	330.851	338.460	350.522	Continuing	Continuing
• Procurement: <i>THAAD Procurement</i>	0.000	709.150	460.728		460.728	565.938	447.427	490.197	463.739	Continuing	Continuing

D. Acquisition Strategy

The planned acquisition strategy for Advance Capability Development activities is for modification to the existing Development contract and award of Task Order contract, targeted for award in FY 2012. The program is posturing for potential competitive awards of select components. Continuation of a Sole Source Task Order Delivery Order Contract for Field Support and Contractor Logistics Support is included.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks

N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test Flight Test Planning, Analysis, and Execution	Various	LMSSC:Sunnyvale, CA/ Huntsville, AL	-	-		18.583	Nov 2012	-		18.583	Continuing	Continuing	Continuing
System Test Flight Test Range Infrastructure/ Execution	MIPR	Reagan Test Site:Kwajalein Atoll	-	-		12.604	Nov 2012	-		12.604	Continuing	Continuing	Continuing
System Test Flight Test Support and Planning	Various	MDA:Ft. Belvoir, VA/ Huntsville, AL	-	-		20.428	Nov 2012	-		20.428	Continuing	Continuing	Continuing
System Test BMDs Ground Testing and Flight Test Support	MIPR	US Army AMRDEC:Huntsville, AL	-	-		19.313	Nov 2012	-		19.313	Continuing	Continuing	Continuing
Subtotal			-	-		70.928		-		70.928			

Remarks

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		70.928		-		70.928			

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MT07: <i>THAAD Test</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Conduct FTO-01 (GMD/Aegis/THAAD/PATRIOT Multiple Engagement Flight Test)	3	2013	3	2013
Conduct FTT-11a (THAAD Intercept Flight Test)	4	2014	4	2014
Conduct FTO-2 (GMD/Aegis/THAAD/PATRIOT Multiple Engagement Flight Test)	4	2015	4	2015
Conduct FTT-15 (THAAD Intercept Flight Test)	2	2017	2	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>	1.128	1.230	1.145	-	1.145	1.103	1.121	1.236	1.260	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

N/A

A. Mission Description and Budget Item Justification

PATRIOT Advanced Capability (PAC 3) is one of the most mature elements of the Ballistic Missile Defense System and is now operational with the U.S. Army. It is a land-based element built upon the proven PATRIOT air and missile defense infrastructure.

The PATRIOT Advanced Capability-3 System was deployed to the Middle East as part of Operation Iraqi Freedom where it successfully engaged several ballistic missiles.

The Army is responsible for production and further development of Advanced Capability-3 System; the Missile Defense Agency remains responsible for the Ballistic Missile Defense System interoperability and integration efforts. LTPO will utilize MDA funds to further the integration of PATRIOT into the BMDS. These funds are covering day to day tasks leveraged upon the LTPO by MDA to support meetings and RFIs. These funds are placed on contract to the SETA contractor.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: General Support	1.128	1.230	1.145
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments:			
-Support the day to day tasking that is leveraged upon Lower Tier Project Office (LTPO) by MDA based on the Transfer and Transition Plan Annex L.			
FY 2012 Plans:			
-Support the day to day tasking that is leveraged upon Lower Tier Project Office (LTPO) by MDA based on the Transfer and Transition Plan Annex L.			
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
-Support the day to day tasking that is leveraged upon Lower Tier Project Office (LTPO) by MDA based on the Transfer and Transition Plan Annex L.			
Accomplishments/Planned Programs Subtotals	1.128	1.230	1.145

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603890C: <i>BMD Enabling Programs</i>	401.113	415.048	362.711		362.711	339.197	373.346	395.350	394.085	Continuing	Continuing

D. Acquisition Strategy

The design objective of the PATRIOT system is to provide an element of the Ballistic Missile Defense System capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
General Support Evolutionary Development Program (EDP) Task 2	SS/FFP	Multiple:Multiple	32.360	-		-		-		-	32.360	64.720	32.360
Subtotal			32.360	-		-		-		-	32.360	64.720	32.360

Remarks
N/A

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
General Support General Support	C/FFP	ITT/CAS:Huntsville, AL	2.360	1.230	Jan 2012	1.145	Jan 2013	-		1.145	Continuing	Continuing	Continuing
Subtotal			2.360	1.230		1.145		-		1.145			

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD06: <i>Patriot Advanced Capability-3 (PAC-3)</i>
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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
N/A

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	34.720	1.230		1.145		-		1.145			

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	20.963	12.555	14.987	-	14.987	15.163	16.486	12.286	14.169	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

Note

In FY 2012, Program Wide Support reflects a proportional decrease as a result of adjustments to the BMD Terminal Defense Segment.

In FY 2013, Program Wide Support reflects a proportional increase as a result of increases to the BMD Terminal Defense Segment.

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of the MDA functions and activities across the entire Ballistic Missile Defense System (BMDS). Includes Government Civilians, Advisory and Assistance Services, Federally Funded Research and Development (FFRDC) contracts providing integrity and oversight of the BMDS as well as, supporting MDA in enabling the development and evaluation of technologies that will respond to the changing threat. Other costs included provide facility capabilities for MDA Executing Agent locations (with the exception of Federal Office Building 2 after FY 2011), such as physical and technical security, legal services, travel and agency training, office and equipment leases, rents and utilities, data and unified communications support, supplies and maintenance, logistics and central property management of equipment, and similar operating expenses. Also includes legal settlements, and foreign currency fluctuations on a limited number of foreign contracts. In keeping with congressional intent, PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the total MDA budget.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Civilian Salaries and Support	20.963	12.555	14.987
Articles:	0	0	0
Description: See Description Below			
FY 2011 Accomplishments: See paragraph A, Mission Description and Budget Item Justification			
FY 2012 Plans: See paragraph A, Mission Description and Budget Item Justification			
FY 2013 Plans: See paragraph A, Mission Description and budget item justification.			
Accomplishments/Planned Programs Subtotals	20.963	12.555	14.987

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Missile Defense Agency		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	PROJECT MD40: <i>Program-Wide Support</i>

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

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A