Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*				R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	164.670	132.220	75.003	-	75.003	103.844	111.712	164.378	170.851	Continuing	Continuing
WX25: *Advanced Technology Development*	162.088	-	-	-	-	-	-	-	-	0.000	162.088
MD25: *Advanced Technology*	-	127.236	72.331	-	72.331	100.060	107.404	158.384	164.631	Continuing	Continuing
ZX40: *Program-Wide Support*	2.582	-	-	-	-	-	-	-	-	0.000	2.582
MD40: *Program Wide Support*	-	4.984	2.672	-	2.672	3.784	4.308	5.994	6.220	Continuing	Continuing

Note

Beginning in FY 2012, funding for High Performance Interceptor ($91.341 million) moves from Advanced Technology (MD25) to SM-3 Block IIB Program Element 0603902C.

Beginning in FY 2012, funding for the Enterprise Sensors Laboratory ($17.500 million) moves from BMD Sensors Program Element 0603884C to the BMD Technology Program Element 0603175C.

A. Mission Description and Budget Item Justification

The Advanced Technology Development effort develops technology to address emerging threats. Enhanced Command, Control, Battle Management and Communication improves the ability of BMDS to counter raids and integrates early intercept experiments. High Performance Interceptor matures technology to reduce interceptor costs, improve reliability, and increase speed, which will enable earlier intercepts. This program element also invests in next generation technology by conducting research with universities, University Affiliated Research Centers (UARC), Federally Funded Research and Development Centers (FFRDC), small businesses and industry at all levels to address the threats we expect to face in the future.

The Agency`s Advanced Technology portfolio focuses on developing and demonstrating technology that address potential gaps in the BMDS identified by the warfighter in the Prioritized Capabilities List. Contributions to Combatant Commanders` Priorities Capabilities List include:

- Evaluate airborne and space based sensor data for applicability to the future BMDS
- Integrate and fuse sensor data for greater track accuracy
- Classify, identify, characterize, and discriminate items of interest
- Direct/control all battle management, command, and control operations in connection with response to a threat
- Engage and re-engage a threat

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603175C: *Ballistic Missile Defense Technology*

Three goals for Advanced Technology are:

- Pursue cost and operationally effective capabilities to explore and develop technologies for use against future threats
- Develop and demonstrate the maturity of the components of future BMDS architectures, in next and future generations, by conducting experiments to enable thorough assessment
- Leverage technology investments of other DoD organizations, industry, other government agencies and international partners

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	189.229	132.220	236.875	-	236.875
Current President's Budget	164.670	132.220	75.003	-	75.003
Total Adjustments	-24.559	-	-161.872	-	-161.872
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	8.809	-			
• SBIR/STTR Transfer	-0.814	-			
• Other Adjustment Detail	-32.554	-	-161.872	-	-161.872

Change Summary Explanation

The FY12 $161.872 million dollar decrease in this program element is the result of the move of High Performance Interceptor content and associated funding to the Standard Missile-3 Block IIB PE 0603902C.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT WX25: *Advanced Technology Development*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
WX25: *Advanced Technology Development*	162.088	-	-	-	-	-	-	-	-	0.000	162.088

A. Mission Description and Budget Item Justification

Project WX25 has been transferred to Project MD25.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: See FY 2010 Accomplishments in Project MD25	162.088	-	-
Description: See Description Below			
FY 2010 Accomplishments:			
Accomplishments/Planned Programs Subtotals	162.088	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD25: *Advanced Technology*	-	127.236	72.331	-	72.331	100.060	107.404	158.384	164.631	Continuing	Continuing

A. Mission Description and Budget Item Justification

-High Performance Interceptor

-Beginning in FY 2012, this work transfers to the SM-3 Block IIB Program Element
-Enhanced Command, Control, Battle Management and Communication

-Develop airborne and space sensor tasking, cueing and data management capability in a net-centric modular architecture to handle larger raids
-Develop interfaces and conduct experiments to integrate the Airborne Infrared and the Precision Tracking Space System into the BMDS
-Develop and deliver to C2BMC advanced track algorithms and the capability to cue and reverse-cue satellite, airborne and terrestrial sensors via the Enterprise Sensors Laboratory
-Advanced Research

-Develop designs for assessing integrated hardware and software performance in representative BMDS threat scenarios
-Develop new early intercept capabilities by leveraging industry and universities research
-Develop large Focal Plane Arrays with signal-to-noise ten times higher than current Mercury Cadmium Telluride Focal Plane Arrays, and improve fabrication yield rates to greater than 40 percent
-Small Business Innovation Research Program Support

-Develop synergistic structures with multiple functions (e.g. fuel tanks or batteries that function as a load-bearing kill vehicle structure and/or protect against hostile environment) or structures/materials with embedded components (e.g. electrical, optical, power, cabling, propulsion, sub-structures, isolation, etc) for a next generation interceptor kill vehicle
-Create a sensor with sufficient field of regard, resolution and speed to support jitter suppression and image stabilization capable of sustained 10 kilohertz operations to support high speed control loops and sensitivity in the 800-1100 nanometer wavelength band

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: High Performance Interceptor Components	-	40.790	-
Description: See Description Below			
FY 2010 Accomplishments: Funding for these FY 2010 accomplishments is reported in prior year budget project WX25 ($21,891).			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Conducted high performance liquid upper stage component design verification testing to support engineering unit breadboard testing -Verified divert thruster performance for a prototype liquid divert and attitude control system -Verified attitude control system for a prototype liquid divert and attitude control system -Verified propellant tank performance for a prototype liquid divert and attitude control system -Verified pressurization system performance for a liquid divert and attitude control system. ***FY 2011 Plans:*** In FY 2011, we will implement the detailed program plan developed during FY 2010 for high performance interceptor component development. We plan near term technology demonstrations for lightweight divert and attitude control systems and axial control stages. -Prove integrated upper stage propulsion performance of a breadboard unit in a static fire test to demonstrate the integration of the pressurization system with a common bulkhead tank and multiple axial thrusters -Validate upper stage thruster performance in a static firing test at sea level to demonstrate an axial thruster performance to improve thrust level by 15 percent over breadboard thruster performance and to demonstrate a light weight thruster using ceramic matrix composite thrust chambers, reducing inert mass by 20 percent. ***FY 2012 Plans:*** Plans for FY 2012 are captured in SM-3 Blk IIB Program Element 0603902C.			
Title: Enhanced Command, Control, Battle Management and Communication ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY2010 accomplishments is reported in prior budget year project WX25 ($59,459). -Initiated development of an Integrated Sensor Manager that integrates Airborne and Space sensors for experiments to determine impacts of these systems on raid handling -Established Enhanced Command, Control, Battle Management and Communications (EC2BMC) Investigation - awarded contracts to universities to explore Command and Control architectures -Defined functional allocation to integrate Precision Tracking Space System (PTSS) into the BMDS ***FY 2011 Plans:*** -Demonstrate experimental net-centric, service oriented architecture for both sensor resource and battle management	-	51.800	49.453

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Demonstrate multi-sensor (Airborne Infrared and space sensors) signal processing capabilities to provide Command and Control, Battle Management and Communications (C2BMC) and sensor data (position, velocity, and discrimination of sufficient accuracy and low enough latency to complete ballistic missile engagements) in realistic test environments -Collect C2BMC and sensor data for the basis for BMD System Engineering technical trade studies between sensors and guided interceptors to allocate functions and performance requirements ***FY 2012 Plans:*** -Develop upgraded multi-sensor (Airborne Infrared and space sensors) tasking and signal processing capabilities to demonstrate ability to produce three-dimensional tracks with sufficient quality (position, velocity, error volumes, and latency) to complete ballistic missile engage-on-remote in realistic test environments -Conduct integrated experiments with C2BMC, Airborne Infrared (ABIR) and Space Tracking and Surveillance System (STSS) to prove Aegis Launch-On-Remote with STSS and ABIR -Develop interfaces with Precision Tracking Space System (PTSS) ground segment and the rest of the BMDS via the Enterprise Sensors Laboratory (ESL) -Investigate advanced algorithms and Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance net-centric modular architectures for increased raid capability -Develop advanced techniques for STSS data fusion, ABIR cueing, and Hit/Kill Assessment -Develop and deliver algorithms to C2BMC that incorporates the improved ballistic cue for mid-course sensors			
Title: Advanced Research ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY2010 accomplishments is reported in prior year budget project WX25 ($58,881). -Continued contributions in Focal Plane Array research for large field of view infrared search and track systems -Continued development of Strained Layered Super-lattice (SLS) program for high-performance infrared focal plane arrays for SM-3 Blk IIB and Airborne Infrared (ABIR) -SLS signal to noise ratio is predicted 10 times higher than Mercury Cadmium Telluride (MCT) at the same cutoff wavelength and operating temperature -SLS is predicted to operate at 30K higher temperature which will significantly reduce the system size, weight, and power consumption; yield of SLS is expected to be greater than 40 percent, and cost much less than MCT -Continued to develop two-color 512x512 MCT focal plane arrays for SM3-Block IIA and follow-on interceptors	-	20.510	16.561

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Demonstrated breakthrough in MCT wafer cutoff wavelength uniformity which will significantly improve the yield -Built two integrated dewar cooler assemblies (IDCA) and will deliver for lab and flight test -Updated the design of read-out integrated circuits (ROICs) to reduce overall noise -Conducted preliminary Precision Tracking Space System analyses and trade studies leading to a System Concept and Review in 2010 -Continued development of diode pumped alkali laser technology to enable future light weight, compact, high power directed energy concepts -Continued development of cryogenically cooled diode pumped solid state laser technology for advanced track illuminator and high energy laser applications to hedge against future threats -Continued development of fiber laser beam combining technologies -Awarded three Advanced Research contracts to domestic universities for system engineering and sensor management capabilities -Completed Scalable Panels for Efficient Affordable Radar Spiral 2 radio frequency panels to improve detection range, increase number of tracking beams, and develop improved waveforms			
FY 2011 Plans: -Next Generation Radar -Build and test next generation radar components -Electro-optical infrared passive sensors -Continue two-color Mercury Cadmium Telluride long wavelength 512X512 Focal Plane Array (FPA) yield improvement and integrated dewar cooler assembly delivery for testing Demonstrate 1k x 1k Strained Layer Super-lattice (SLS) long wavelength cutoff FPAs for Precision Tracking Space System; demonstrate high yield and low cost of SLS FPAs -Demonstrate two-color SLS FPA concept and FPAs -Algorithms and Software -Algorithm development for net-centric operations and adaptive communication systems -Innovation -Receive and coordinate the technical review of White Papers generated from the Advanced Technology Broad Agency Announcements			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Manage new and existing awards to promulgate breakthrough technology into the BMDS ***FY 2012 Plans:*** -Continue development and improvement of Strained Layer Super-Lattice (SLS) infrared material -Test and validate FPA deliverables -Award Advanced Research contracts to domestic universities for innovative early intercept investigations -Conduct Advanced Technology Innovation BAA solicitation for identifying potentially breakthrough research on missile defense related technology			
Title: Small Business Innovation Research Program Support ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for these FY 2010 accomplishments is reported in prior year budget project WX25 ($9,290). -Executed the FY10 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) investment strategy including eight Research Areas, 40 SBIR topics, 9 STTR topics, and associated budgets -Awarded 127 Phase I SBIR contracts and 25 Phase 1 STTR contracts leading to 109 follow-on prototype development efforts -Directed Energy -Interceptor Technology -Radar Technology -Space Technology -Command, Control, Battle Management Communications -Modeling and Simulation -Manufacturing, Producibility, and Field Sustainability -Innovative Concepts and Special Focus Projects -Awarded 93 Phase II SBIR contracts and 16 Phase II STTR contracts intended to transition: -GATR Technologies - Deployable Satellite Communications Terminal; used following Hurricanes Katrina and Ike, in Afghanistan, South Africa, South America, and Korea -Vanguard Composites Group - Composite Flange; successfully transition to GMD silos -TREX Enterprises Corporation - Diurnal Star Tracker; schedule to be integrated into Aegis BMD	-	1.290	6.317

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Spectral Sciences and Physical Science - Low-thrust Plume Signature Modeling; incorporated into MDA`s modeling and simulation code -Augmented eight promising Phase II programs to advance their Technology Readiness Level and aid transition/ commercialization -Conducted Phase II Transition invitation and assessments with additional augmentations pending -Generated and received approval for FY11 SBIR/STTR investment strategy including eight Research Areas, 35 SBIR topics, four STTR topics, and associated budgets -Conducted Outreach activities to mentor small business and foster best practices to increase the likelihood of successful technologies being transitioned into the BMDS -Conducted Technology Applications Reviews and Business Focus Workshops to assist MDA-funded technology developers find and enter technology transfer opportunities beyond MDA applications			
FY 2011 Plans: Partial funding for these FY 2011 accomplishments is reported in budget project MD25 Advanced Research ($5,000) -Conduct Technology Applications Reviews to assist MDA-funded technology developers find and enter technology transfer opportunities beyond MDA applications -Conduct Business Focus Workshops with MDA SBIR Phase I companies to help develop a successful business model for their technology early in the development cycle -Publish the MDA Technology Applications annual report, The Spirit of Innovation, and a report on biomedical and life science technology transfer from MDA technology on the web -Administer, update, and expand MDA`s dedicated web site for technology transfer -Continue to manage and continually update the Technology Applications program`s internal data handling and tracking system to manage all aspects of the Technology Applications program including historical data -Develop research topics and solicitation for BMDS capabilities to hedge against future threat uncertainties -Execute MDA SBIR/STTR solicitation			
FY 2012 Plans: -Execute the FY12 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) MDA requirements-driven investment strategy including eight research areas, approximately 40 SBIR topics, five STTR topics, and associated budgets -Award approximately 160 Phase I SBIR and 20 Phase I STTR contracts leading to 90 follow-on prototype development efforts -Award approximately 80 Phase II SBIR and 10 Phase II STTR contracts intended to transition to C2BMC, interceptor and space systems			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Augment promising Phase II programs to advance TRLs and aid transition/commercialization -Conduct Phase II Transition invitation and assessments with additional augmentations pending -Generate and receive approval for FY13 SBIR/STTR investment strategy including eight Research Areas, SBIR topics, STTR topics, and associated budgets -Conduct outreach activities to mentor small business and foster best practices to increase the likelihood of successful technologies being transitioned into the BMDS -Conduct Technology Applications Reviews and Business Focus Workshops to assist MDA-funded technology developers find and enter technology transfer opportunities beyond MDA applications			
Title: Advanced Communications Technology ***Description:*** See Description Below ***FY 2010 Accomplishments:*** Funding for the FY 2010 accomplishments is reported in prior year budget project WX25 ($12,567). FY 2010 accomplishments are captured in BMD C2BMC Program Element 0603896C. ***FY 2011 Plans:*** -Commence/continue activities to enable the integration of advanced C2BMC capabilities into BMDS subsystems -Demonstrate and evaluate advanced C2BMC capabilities in live-flight test events -Continue to evolve war fighter concept of operations (CONOPS) to insert new subsystems and capabilities into the BMDS in the areas of boost phase tracking and classification, sensor resource management, weapons resource management addressing countermeasures, post-intercept debris information flow, and communication with allies and friendly nations in support of Phased Adaptive Approach capabilities -Develop and demonstrate next generation sensor netting and sensor resource management techniques -Conduct sensor netting experiments associated with tracking, integrated discrimination, sensor resource tasking, and Communications/bandwidth constraints -Develop and demonstrate advanced battle management (BM) and integrated fire control capabilities -Conduct architecture assessments of BM functions federated within C2BMC and various allied/coalition partners and friendly nations	-	12.846	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD25: *Advanced Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
-Integrate the CONOPS information for advanced and emerging BMDS capabilities (such as Early Intercept and Space Tracking and Surveillance System (STSS)) into battle management constructs ***FY 2012 Plans:*** FY 2012 Plans are captured in BMD C2BMC Program Element 0603896C ($11,561)			
Accomplishments/Planned Programs Subtotals	-	127.236	72.331

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0603884C: *Ballistic Missile Defense Sensors*	544.352	454.859	222.374		222.374	357.271	336.514	318.321	348.944	Continuing	Continuing
• 0603893C: *SPACE TRACKING & SURVEILLANCE SYSTEM*	148.506	112.678	96.353		96.353	53.577	47.592	32.289	34.308	Continuing	Continuing
• 0603896C: *BMD C2BMC*	327.074	342.625	364.103		364.103	330.337	353.081	338.835	304.217	Continuing	Continuing
• 0603901C: *DIRECTED ENERGY RESEARCH*	0.000	98.688	96.329		96.329	91.953	93.134	92.304	95.003	Continuing	Continuing
• 0603902C: *STANDARD MISSILE-3 BLOCK IIB (SM-3 IIB)*	0.000	0.000	123.456		123.456	433.106	384.647	401.141	394.803	Continuing	Continuing
• 0604884C: *AIRBORNE INFRARED (ABIR)*	0.000	111.671	46.877		46.877	49.948	49.173	33.035	34.249	Continuing	Continuing

D. Acquisition Strategy

The acquisition strategy to conduct this technology development effort consists of partnering with Federally Funded Research and Development Centers and University Affiliated Research Centers. MDA will also award contracts to industry and universities via the Advanced Technology Innovation Broad Agency Announcement and competitive procurements.

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT ZX40: *Program-Wide Support*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
ZX40: *Program-Wide Support*	2.582	-	-	-	-	-	-	-	-	0.000	2.582

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Project ZX40 has been transferred project MD40.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Civilian Salaries and Support	2.582	-	-
Description: See Description Below			
FY 2010 Accomplishments: NA			
Accomplishments/Planned Programs Subtotals	2.582	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

NA

E. Performance Metrics

NA

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603175C: *Ballistic Missile Defense Technology*	PROJECT MD40: *Program Wide Support*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD40: *Program Wide Support*	-	4.984	2.672	-	2.672	3.784	4.308	5.994	6.220	Continuing	Continuing

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of MDA functions and activities across the entire Ballistic Missile Defense System (BMDS). Includes Government Civilians, Advisory and Assistance Services, and Federally Funded Research and Development Contracts (FFRDC) 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, 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 among the PEs on a pro-rata basis and therefore fluctuates by year based on the total MDA budget and the individual PE`s budget amount.

Funding for the FY 2010 accomplishments is reported in prior year budget project ZX40 ($2,275).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Civilian Salaries and Support	-	4.984	2.672
Description: See Description Below			
FY 2010 Accomplishments: Funding for the FY 2010 accomplishments is reported in prior year budget project ZX40 ($2,275).			
FY 2011 Plans: See Paragraph A, Mission Description and budget item justification			
FY 2012 Plans: See Paragraph A, Mission Description and budget item justification			
Accomplishments/Planned Programs Subtotals	-	4.984	2.672

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603175C: *Ballistic Missile Defense Technology*	**PROJECT** MD40: *Program Wide Support*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

NA