

**UNCLASSIFIED**

<b>Missile Defense Agency (MDA) Exhibit R-2 RDT&amp;E Budget Item Justification</b>						Date <b>May 2009</b>		
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<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 NOMENCLATURE</b>				
<b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				<b>0603886C Ballistic Missile Defense System Interceptors</b>				

COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Total PE Cost	330,874	385,493	0					
WX13 Ballistic Missile Defense Interceptor Capability Development	317,340	374,343	0					
ZX40 Program-Wide Support	13,534	11,150	0					

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

**A.1 System Element Description**

The Kinetic Energy Interceptors (KEI) mission is to develop a mobile, multi-use (boost, ascent, midcourse) kinetic energy intercept capability to enhance the layered defense performance of the Ballistic Missile Defense System (BMDS). KEI's unique mobility and performance combination brings to the BMDS the capability to engage threats in the early, forward portion of the BMDS battle space. The interceptor design concept is compatible with land-mobile and sea-mobile operations and features a high performance booster designed to carry multiple payload types. The KEI common booster will be capable of carrying Multiple Kill Vehicles (MKVs) and other advanced payloads to identify, seek out, and destroy lethal objects within a threat cluster in the future capability development block. With a multiple kill vehicle payload, more objects can be destroyed with one interceptor. This would save interceptor inventory, reduce infrastructure costs, and improve overall probability of engagement success for the BMDS. KEI's mobility, fast acceleration, and capability to close the fire control loop during the boost phase enable delivery of these payloads early in the midcourse timeline. KEI's ability to execute its suite of missions is enabled by a flexible fire control design that allows the interceptor to receive data from a diverse suite of ballistic missile defense sensors (land, sea, and space), fuse this information in real time, and execute an effective intercept. By adding a boost phase kinetic energy intercept layer and flexible ascent/midcourse capabilities to future BMDS capabilities, KEI enables the MDA to pace the threat, fill performance gaps, and increase BMDS effectiveness.

The program execution will focus on the orderly termination and close-out FY2009.

The KEI program had been restructured in 2007 to emphasize development of a high acceleration booster. However, we have encountered considerable technical issues and delays during development, such as repeated first and second booster case failures, thrust nozzle concerns, overheating of avionics, thermal battery canister failure, and C-Band transponder failure during shock testing. Even if such technical problems could be solved without excessive cost and schedule implications, we have become concerned about the cost-effectiveness of the KEI interceptor, which is currently estimated at \$75 million per unit.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603886C Ballistic Missile Defense System Interceptors
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MDA Element testing is based on an integrated, comprehensive, and phased test program. Element systems, subsystems, and components are tested early in development and are necessary prior to conducting BMD-System level testing. KEI Element level testing is funded as part of a developmental program and reflected in this Program Element submission. BMDS Test Policy, MDA Directive 3202.03 (Jan 09) applies to all Flight, Integrated Ground, and Distributed Ground Tests, and Post-test analysis and reconstructions listed in the Integrated Master Test Plan.

The KEI Program Office will implement a Program Termination Plan. This plan will include the identification of program deliverables and/or salvageable technologies that have value to other Government entities. The program office will implement the terminating contract modifications to include termination liability cost activities and resolution of unliquidated obligations. The program office will implement a funding plan for program termination, program office disestablishment, and other anticipated funding requirements. The program office will establish a timetable for withdrawal of program funds and address the status of funding actions that may have an actual or contingent liability. This plan will include a disposition of all manpower authorizations and personnel involved in the program. As appropriate, the plan will include the schedule of proposed drawdown of manpower authorizations. Finally, the plan will address requirements for data and drawings storage, program documentation, and configuration management, and KEI program office files and records.

KEI supports MDA System Engineering in developing a plan for KEI element level simulation (KEISim) integration in BMDS level simulations for use in: Wargames, Ground Tests, Performance Assessments, and other system level modeling and simulation events. KEISim development is focused on modeling interceptor performance for midcourse engagements using GFE payloads. KEI uses detailed engineering models of booster performance to support development and ground tests. A Verification, Validation & Accreditation Program to accredit KEISim for program and MDA uses is planned for the future.

**A.2 System Element Budget Justification and Contribution to the Ballistic Missile Defense System (BMDS)**

Kinetic Energy Interceptors (KEI) will provide the Ballistic Missile Defense System (BMDS) a strategically deployable, tactically mobile, land and sea-based capability to defeat medium to long-range ballistic missiles during the boost, ascent, and midcourse phase of flight. Currently, KEI is focused on developing a high performance booster. Program plans focus on booster development and its integration with a separately developed Kill Vehicle (KV). KEI is currently in the Capabilities Development Block.

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**A.3 Major System Element Goals**

Concurrent with the release of the FY10 PB submission, the KEI Program Office will implement a Program Termination Plan.

**A.4 Major Events Schedule and Description**

Major Event	Project	Timeframe	Description
<b>Flight Test</b>			
<b>Kinetic Energy Interceptors Flight Test Events</b>			
			•
			•
<b>Other</b>			
<b>Interceptor</b>			
Stage 2 Rocket Motor Static Fire One	WX13	1Q FY 2008	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> <li>• Completed</li> </ul>
Stage 2 Rocket Motor Static Fire Two	WX13	4Q FY 2008	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> <li>• Completed</li> </ul>
Stage 1 Rocket Motor Static Fire Three	WX13	1Q FY 2009	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> <li>• Completed</li> </ul>
Stage 1 Rocket Motor Static Fire Four	WX13	3Q FY 2009	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> </ul>
Stage 2 Rocket Motor Static Fire Four	WX13	3Q FY 2009	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> </ul>
Stage 2 Rocket Motor Static Fire Three	WX13	3Q FY 2009	<ul style="list-style-type: none"> <li>• Validate performance under varied environments</li> </ul>

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<b>B. Program Change Summary</b>	FY 2008	FY 2009	FY 2010	FY 2011
Previous President's Budget (FY2009 PB)	340,107	386,817	500,966	
Current President's Budget (FY2010 PB)	330,874	385,493	0	
Total Adjustments	-9,233	-1,324	0	
Congressional Program Reductions	0	-1,324	0	
Congressional Rescissions	0	0	0	
Total Congressional Increases	0	0	0	
Total Reprogrammings	-3,750	0	0	
SBIR/STTR Transfer	-5,483	0	0	
Adjustments to Budget Years	0	0	-500,966	

FY2008 and FY2009 decreases include SBIR/STTR transfer and MDA reprogrammings.  
 FY2010 decrease is the result of program termination.

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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>
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COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
WX13 Ballistic Missile Defense Interceptor Capability Development	317,340	374,343	0					
RDT&E Articles Qty	0	1						

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

The Kinetic Energy Interceptors (KEI) mission is to develop a mobile, multi-use (boost, ascent, midcourse) kinetic energy intercept capability to enhance the layered defense performance of the Ballistic Missile Defense System (BMDS). KEI's unique mobility and performance combination brings to the BMDS the capability to engage threats in the early, forward portion of the BMDS battle space. The interceptor design concept is compatible with land-mobile and sea-mobile operations and features a high performance booster designed to carry multiple payload types. The KEI common booster will be capable of carrying advanced payloads to identify, seek out, and destroy lethal objects within a threat cluster in the future capability development block. With a multiple kill vehicle payload, more objects can be destroyed with one interceptor. This would save interceptor inventory, reduce infrastructure costs, and improve overall probability of engagement success for the BMDS. KEI's mobility, fast acceleration, and capability to close the fire control loop during the boost phase enable delivery of these payloads early in the midcourse timeline. KEI's ability to execute its suite of missions is enabled by a flexible fire control design that allows the interceptor to receive data from a diverse suite of ballistic missile defense sensors (land, sea, and space), fuse this information in real time, and execute an effective intercept. By adding a boost phase kinetic energy intercept layer and flexible ascent/midcourse capabilities to future BMDS capabilities, KEI enables the MDA to pace the threat, fill performance gaps, and increase BMDS effectiveness.

Concurrent with the release of the FY10 PB submission, the KEI Program Office will implement a Program Termination Plan.

**B. Accomplishments/Planned Program**

	FY 2008	FY 2009	FY 2010	FY 2011
Termination and Close out	0	173,346	0	
RDT&E Articles (Quantity)	0	0	0	

**FY2009 Planned Program:**

- The KEI Program Office will implement a Program Termination Plan. This plan will include the identification of program deliverables and/or salvageable technologies that have value to other Government entities. The program office will implement the terminating contract modifications to include termination liability cost activities and resolution of unliquidated obligations. The program office will implement a funding plan for

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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>
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- program termination, program office disestablishment, and other anticipated funding requirements. The program office will establish a timetable for withdrawal of program funds and address the status of funding actions that may have an actual or contingent liability. This plan will include a disposition of all manpower authorizations and personnel involved in the program. As appropriate, the plan will include the schedule of proposed drawdown of manpower authorizations. Finally, the plan will address requirements for data and drawings storage, program documentation, and configuration management, and KEI program office files and records.

	FY 2008	FY 2009	FY 2010	FY 2011
Interceptor	161,415	162,925	0	
RDT&E Articles (Quantity)	0	1	0	

**FY2008 Accomplishments:**

- Conducted Stage 2 rocket motor static fire one (S2 DVT-1)
- Initiated integration and testing of Booster Flight Test One (FTK-01) pathfinder vehicle
- Conducted Stage 2 rocket motor static fire two (S2 DVT-2)

**FY2009 Planned Program:**

- Conduct one Stage 1 rocket motor static fires to validate performance
- Complete final integration and testing of FTK-01 pathfinder vehicle and conduct pathfinding activities at Vandenberg Air Force Base (VAFB)

	FY 2008	FY 2009	FY 2010	FY 2011
Element Engineering	139,619	22,894	0	
RDT&E Articles (Quantity)	0	0	0	

**FY2008 Accomplishments:**

- Conducted system requirements review (SRR) for a partial full scale flight test from a canister
- Performed commonality pathfinder engineering and program planning

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	R-1 NOMENCLATURE <b>0603886C Ballistic Missile Defense System Interceptors</b>
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- Performed system engineering, trades, and product development to support completion of BMDS Multiple Kill Vehicle (MKV) SRR
- Supported Divert Attitude Control System/Kill Vehicle pathfinder initiatives

FY2009 Planned Program:

- Conduct a KEI/MKV SRR

	FY 2008	FY 2009	FY 2010	FY 2011
Test and Evaluation	3,068	2,945	0	
RDT&E Articles (Quantity)	0	0	0	

FY2008 Accomplishments:

- Completed initial facilitization and infrastructure improvements at Vandenberg Air Force Base (VAFB) for Booster Flight Test One (FTK-01)

FY2009 Planned Program:

- Partially deliver the launch operation requirements document for FTK-01 to VAFB

	FY 2008	FY 2009	FY 2010	FY 2011
Systems Engineering and Program Management	13,238	12,233	0	
RDT&E Articles (Quantity)	0	0	0	

FY2008 Accomplishments:

- Conducted system engineering in support of a Ballistic Missile Defense System weapon system level system requirements review and follow-on payload system requirements review
- Initiated risk reduction for the CG(X) Modular Launch System

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<b>Missile Defense Agency (MDA) Exhibit R-2A RDT&amp;E Project Justification</b>		Date <b>May 2009</b>
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>	
<ul style="list-style-type: none"><li>• Participated in Nimble Titan and Joint Project Optic Windmill Wargames</li><li>• Provided management, leadership, and planning for all activities</li><li>• Provided salaries, travel, and project-wide support, to include security</li><li>• Provided Quality, Safety, and Mission Assurance (QSMA) operations to ensure compliance with Agency requirements for design, test, manufacturing, quality, safety, and reliability</li></ul> <p>FY2009 Planned Program:</p> <ul style="list-style-type: none"><li>• Provide management, leadership, and planning for all activities</li><li>• Provide salaries, travel, and project-wide support, to include security</li></ul>		



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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>
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**C. Other Program Funding Summary**

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total Cost
PE 0603175C Ballistic Missile Defense Technology	106,437	119,308	109,760						-
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,034,478	956,686	719,465						-
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,198,664	1,507,481	982,922						-
PE 0603883C Ballistic Missile Defense Boost Defense Segment	503,475	400,751	186,697						-
PE 0603884C Ballistic Missile Defense Sensors	574,231	777,693	636,856						-
PE 0603888C Ballistic Missile Defense Test and Targets	619,137	919,956	966,752						-
PE 0603890C Ballistic Missile Defense Enabling Programs	416,937	402,778	369,145						-
PE 0603891C Special Programs – MDA	193,157	175,712	301,566						-
PE 0603892C Ballistic Missile Defense Aegis	1,126,337	1,113,655	1,690,758						-
PE 0603893C Space Tracking & Surveillance System	226,499	208,923	180,000						-
PE 0603894C Multiple Kill Vehicle	223,084	283,481	0						-
PE 0603895C BMD System Space Program	16,237	24,686	12,549						-
PE 0603896C BMD C2BMC	439,997	288,287	340,014						-
PE 0603897C BMD Hercules	51,387	55,764	48,186						-
PE 0603898C BMD Joint Warfighter Support	45,400	69,743	60,921						-
PE 0603904C Missile Defense Integration & Operations Center (MDIOC)	77,102	106,040	86,949						-
PE 0603906C Regarding Trench	1,945	2,968	6,164						-
PE 0603907C Sea Based X-Band Radar (SBX)	155,244	146,895	174,576						-
PE 0603908C BMD Europ Intercep Site	0	362,007	0						-
PE 0603909C BMD Europ Midcourse Radar	0	76,537	0						-
PE 0603911C BMD European Capability	0	0	50,504						-
PE 0603912C BMD European Comm Support	0	27,008	0						-
PE 0603913C Israeli Cooperative	0	0	119,634						-
PE 0605502C Small Business Innovative Research BMDO	137,409	0	0						-
PE 0901585C Pentagon Reservation	5,971	19,667	19,709						-
PE 0901598C Management Headquarters – MDA	83,907	81,174	57,403						-

*Note: The Ballistic Missile Defense System (BMDS) is an integrated, interoperable, global defense system. The programs that comprise the BMDS are interdependent.*

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603886C Ballistic Missile Defense System Interceptors	

**D. Acquisition Strategy**

The Kinetic Energy Interceptors (KEI) development and test acquisition strategy focuses on developing gap-filling, multi-use kinetic energy capabilities for strategically deployable land-mobile and sea-mobile platforms. The KEI element is being developed under a single prime contractor selected competitively at the start of development. The revised acquisition strategy for KEI is for payloads to be budgeted and developed under other BMDS elements that deliver each payload for integration into the KEI element.

The FY2005 through FY2009 development verification test results mitigate critical program risks and provide the agency with very detailed design, performance, cost, and programmatic knowledge to support the FY2009 Knowledge Point decision. This strategy will implement early proofing of critical manufacturing processes as an integral part of the design process.

The payoff for these up-front program investments in systems engineering, full scale risk reduction testing, and manufacturing processes development is reduced redesign and retest, fewer test failures, and lowered manufacturing cost. The strategy will utilize engineering and manufacturing readiness levels and software readiness levels as maturity and risk indicators for proceeding forward with detailed design, building flight hardware, and having a production off-ramp.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603886C Ballistic Missile Defense System Interceptors					
<b>I. Product Development Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
<b>Interceptor</b>										
Interceptor	C/CPAF	Northrop Grumman - VA, AL, CA, PA/ Raytheon & Orbital-AZ, ATK-MD, UT	161,415	162,925	1/2Q	0				324,340
<b>Element Engineering</b>										
Contractor Element Engineering	C/CPAF	Northrop Grumman - VA, AL, CA, PA/ Raytheon & Orbital-AZ, ATK-MD, UT	115,214							138,108
Contractor KEI BMDS KV Engineering and Development	C/CPFF	Northrop Grumman - VA, AL; Raytheon - AZ	22,850	22,894	1/2Q	0				22,850
<b>Systems Engineering and Program Management</b>										
Government Furnished Equipment	Various	Missile Defense Agency, Huntsville, AL	0	0	N/A	0				57
CG(X) Sea-Based Modular Launcher	C/CPAF	Northrop Grumman - Fairfax, VA; Sunnyvale, CA	1,555							
Subtotal Product Development			301,034	57	3Q	0				486,763
<b>Remarks</b>										

Project: WX13 Ballistic Missile Defense Interceptor Capability Development

MDA Exhibit R-3 (PE 0603886C)





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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603886C Ballistic Missile Defense System Interceptors					
<b>IV. Management Services Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2009 Cost	FY 2009 Award/ Oblg Date	FY 2010 Cost	FY 2010 Award/ Oblg Date	FY 2011 Cost	FY 2011 Award/ Oblg Date	Total Cost
<b>Systems Engineering and Program Management</b>										
Civilian Salaries and Travel		Missile Defense Agency, Huntsville, AL	1,895	1,769	N/A	0	N/A			3,664
Engineering Program Support	C/FFP	COLSA Corp, Huntsville, AL/ AMRDEC, Huntsville, AL	1,588	834	2/3Q	0				2,422
<b>Termination and Close out</b>										
Termination and Close out	Various	Missile Defense Agency, Huntsville, AL		173,346	N/A	0	N/A			173,346
Subtotal Management Services			3,483	175,949		0				179,432
<b>Remarks</b>										
Project Total Cost			317,340	374,343		0				691,683
<b>Remarks</b>										

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<b>Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile</b>	Date <b>May 2009</b>
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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>
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Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
<b>Kinetic Energy Interceptors Flight Test Events</b>																																				
Booster Flight Test One (FTK-01)								☆																												
<b>Interceptor</b>																																				
Stage 2 Rocket Motor Static Fire One	▲																																			
Stage 2 Rocket Motor Static Fire Two				▲																																
Stage 1 Rocket Motor Static Fire Three								▲																												
Stage 1 Rocket Motor Static Fire Four												△																								
Stage 2 Rocket Motor Static Fire Three												△																								
Stage 2 Rocket Motor Static Fire Four												△																								

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	☆	Milestone Decision (planned)
◆	Element Test (complete)	◇	Element Test (planned)
◊	System Level Test (complete)	◊	System Level Test (planned)
▲—▲	Complete Activity	△—△	Planned Activity

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<b>Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail</b>						Date <b>May 2009</b>		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				<b>R-1 NOMENCLATURE</b> <b>0603886C Ballistic Missile Defense System Interceptors</b>				
<b>Schedule Profile</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
<b>Kinetic Energy Interceptors Flight Test Events</b>								
Booster Flight Test One (FTK-01)		4Q						
<b>Interceptor</b>								
Stage 2 Rocket Motor Static Fire One	1Q							
Stage 2 Rocket Motor Static Fire Two	4Q							
Stage 1 Rocket Motor Static Fire Three		1Q						
Stage 1 Rocket Motor Static Fire Four		3Q						
Stage 2 Rocket Motor Static Fire Three		3Q						
Stage 2 Rocket Motor Static Fire Four		3Q						



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COST (\$ in Thousands)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
ZX40 Program-Wide Support	13,534	11,150	0					
RDT&E Articles Qty	0	0	0					
 <b><u>A. Mission Description and Budget Item Justification</u></b>  Program-Wide Support provides funding for common non-headquarters support functions across the entire program. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Other costs included provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuations on a limited number of foreign contracts.								
 <b><u>B. Accomplishments/Planned Program</u></b>								
	FY 2008	FY 2009	FY 2010	FY 2011				
Civilian Salaries and Support	13,534	11,150	0					
RDT&E Articles (Quantity)	0	0	0					
See Section A: Mission Description and Budget Item Justification								

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**C. Other Program Funding Summary**

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total Cost
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PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,034,478	956,686	719,465						-
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,198,664	1,507,481	982,922						-
PE 0603883C Ballistic Missile Defense Boost Defense Segment	503,475	400,751	186,697						-
PE 0603884C Ballistic Missile Defense Sensors	574,231	777,693	636,856						-
PE 0603888C Ballistic Missile Defense Test and Targets	619,137	919,956	966,752						-
PE 0603890C Ballistic Missile Defense Enabling Programs	416,937	402,778	369,145						-
PE 0603891C Special Programs – MDA	193,157	175,712	301,566						-
PE 0603892C Ballistic Missile Defense Aegis	1,126,337	1,113,655	1,690,758						-
PE 0603893C Space Tracking & Surveillance System	226,499	208,923	180,000						-
PE 0603894C Multiple Kill Vehicle	223,084	283,481	0						-
PE 0603895C BMD System Space Program	16,237	24,686	12,549						-
PE 0603896C BMD C2BMC	439,997	288,287	340,014						-
PE 0603897C BMD Hercules	51,387	55,764	48,186						-
PE 0603898C BMD Joint Warfighter Support	45,400	69,743	60,921						-
PE 0603904C Missile Defense Integration & Operations Center (MDIOC)	77,102	106,040	86,949						-
PE 0603906C Regarding Trench	1,945	2,968	6,164						-
PE 0603907C Sea Based X-Band Radar (SBX)	155,244	146,895	174,576						-
PE 0603908C BMD Europ Intercep Site	0	362,007	0						-
PE 0603909C BMD Europ Midcourse Radar	0	76,537	0						-
PE 0603911C BMD European Capability	0	0	50,504						-
PE 0603912C BMD European Comm Support	0	27,008	0						-
PE 0603913C Israeli Cooperative	0	0	119,634						-
PE 0605502C Small Business Innovative Research BMDO	137,409	0	0						-
PE 0901585C Pentagon Reservation	5,971	19,667	19,709						-
PE 0901598C Management Headquarters – MDA	83,907	81,174	57,403						-

*Note: The Ballistic Missile Defense System (BMDS) is an integrated, interoperable, global defense system. The programs which comprise the BMDS are interdependent.*