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

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	78.463	64.618	56.481	-	56.481	86.709	76.205	74.776	87.415	Continuing	Continuing
MT08: <i>Midcourse Test</i>	-	78.463	61.777	53.192	-	53.192	83.069	72.723	70.935	82.805	Continuing	Continuing
MD40: <i>Program Wide Support</i>	-	0.000	2.841	3.289	-	3.289	3.640	3.482	3.841	4.610	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

Decrease from FY 2016 to FY 2017 is due to the Integrated Master Test Plan changes.

A. Mission Description and Budget Item Justification

Ballistic Missile Defense Midcourse Defense Segment Test provides the Ground-based Midcourse Defense (GMD) program with an enhanced test program that includes flight and ground testing of GMD functionality to demonstrate Enhanced Homeland Defense capabilities against long-range threats. The GMD elements of the BMDS Integrated Master Test Plan (IMTP) are intended to demonstrate the integrated missile defense capabilities under development and ensure the capabilities delivered to the Warfighter are operationally effective, suitable, and survivable.

MT08 Midcourse Test consists of four accomplishment areas: Resources, Flight Test Execution, Ground Test Execution, and Program Operations. Resources consist of the support and framework required to successfully conduct both flight and ground testing. Flight Test Execution and Ground Test Execution accomplishments consist of the execution of the individual tests. Program Operations provides for government management of the Ground-based Midcourse Defense (GMD) Test program.

MD40 Program-Wide Support (PWS) consists of essential non-headquarters management efforts providing integrated and efficient support to MDA functions and activities across the entire BMDS.

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>
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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	79.877	64.618	73.485	-	73.485
Current President's Budget	78.463	64.618	56.481	-	56.481
Total Adjustments	-1.414	0.000	-17.004	-	-17.004
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.414	0.000			
• Other Adjustment	0.000	0.000	-17.004	-	-17.004

Change Summary Explanation

The FY 2017 adjustment reflects a realignment of Department of Defense priorities.

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
MT08: <i>Midcourse Test</i>	-	78.463	61.777	53.192	-	53.192	83.069	72.723	70.935	82.805	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A

A. Mission Description and Budget Item Justification

Midcourse Test provides the Ground-based Midcourse Defense (GMD) program with an enhanced test program that includes flight and ground testing GMD functionality to demonstrate Enhanced Homeland Defense capabilities against long-range threats. The GMD elements of the Integrated Master Test Plan (IMTP) are intended to demonstrate the integrated missile defense capabilities under development and ensure the capabilities delivered to the Warfighter are operationally effective, suitable, and survivable.

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

	FY 2015	FY 2016	FY 2017
Title: Resources	16.187	16.552	14.196
Articles:	-	-	-
Description: Provides support associated with day-to-day operations of the flight and ground test programs to include engineering support for ground test planning, execution, and post-event reconstruction.			
FY 2015 Accomplishments:			
-Provided test infrastructure and coordination of flight test range support from Vandenberg Air Force Base, California for all range activities, engineering, operators and GBI transportation, including preparation for the first GBI salvo flight test			
-Provided Ballistic Missile Defense System (BMDS) flight and ground test execution situational awareness through the use of the Missile Defense Agency Integration and Operations Center (MDIOC) housing flight, ground and operational controlled assets of the GMD system from Colorado Springs, CO			
-Supported pre- and post-flight test mission communications to include fulfillment of requirements and data analysis			
-Provided System Test Lab support to the engineering, accreditation, operations and maintenance of Flight and Ground Test Programs			
-Supported risk reduction testing through the use of the Prime Consolidated Integration Lab designed for engineering and integration activities leading up to scheduled flight tests and supported by appropriate analysts, environments and equipment			
-Initiated salvo range infrastructure upgrades at Vandenberg Air Force Base, California in preparation for the Flight Test Ground-based Midcourse Defense-11 (FTG-11)			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2015	FY 2016	FY 2017
<p>-Provided engineering support for planning and execution of the test events, including test architecture, objectives and assessment criteria, target requirements, M&S for pre-test assessment and post-test review, and develop and establish hardware-in-the-loop (HWIL) M&S integration test cases</p> <p>FY 2016 Plans:</p> <p>-Provide test infrastructure and coordination of flight test range support from Vandenberg Air Force Base, California for all range activities, engineering, operators and GBI transportation, including preparation for the first GBI salvo flight test</p> <p>-Provide BMDS flight and ground test execution situational awareness through the use of the MDIOC housing flight, ground and operational controlled assets of the GMD system from Colorado Springs, CO</p> <p>-Support pre- and post-flight test mission communications to include fulfillment of requirements and data analysis</p> <p>-Provide System Test Lab support to the engineering, accreditation, operations and maintenance of Flight and Ground Test Programs</p> <p>-Support risk reduction testing through the use of the Prime Consolidated Integration Lab designed for engineering and integration activities leading up to scheduled flight tests and supported by appropriate analysts, environments and equipment</p> <p>-Continue salvo range infrastructure upgrades at Vandenberg Air Force Base, California in preparation for the Flight Test Ground-based Midcourse Defense-11 (FTG-11)</p> <p>-Provide engineering support for planning and execution of the test events, including test architecture, objectives and assessment criteria, target requirements, M&S for pre-test assessment and post-test review, and develop and establish hardware-in-the-loop (HWIL) M&S integration test cases</p> <p>FY 2017 Plans:</p> <p>-Decrease from FY 2016 to FY 2017 is due to the Integrated Master Test Plan changes</p> <p>-Provide test infrastructure and coordination of flight test range support from Vandenberg Air Force Base, CA for all range activities, engineering, operators and GBI transportation, including preparation for the first GBI salvo flight test</p> <p>-Provide BMDS flight and ground test execution situational awareness through the use of the MDA Integration and Operations Center (MDIOC) housing flight, ground and operational controlled assets of the GMD system located in Colorado Springs, CO</p> <p>-Support pre- and post-flight test mission communications to include fulfillment of requirements and data analysis</p> <p>-Provide System Test Lab support to the engineering, accreditation, operations and maintenance of facilities supporting the Flight and Ground Test Programs</p> <p>-Support risk reduction testing through the use of the Prime Consolidated Integration Lab designed for engineering and integration activities leading up to scheduled flight tests and supported by appropriate analysts, environments and equipment</p>				

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Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2015	FY 2016	FY 2017	
-Complete salvo range infrastructure upgrades at Vandenberg Air Force Base, California in preparation for the Flight Test Ground-based Midcourse Defense-11 (FTG-11)					
Title: Flight Test Execution		53.888	39.450	19.104	
		Articles:	-	-	-
Description: Flight tests demonstrate the capabilities and/or phenomenology that cannot be adequately tested or obtained during ground testing. Flight tests also provide opportunities to test actual hardware and to demonstrate Ballistic Missile Defense System (BMDS) Element interoperability under operationally realistic conditions.					
FY 2015 Accomplishments: -Continued planning for Ground-based Midcourse Defense Control Test Vehicle-02+ (CTV-02+), a 3-stage Capability Enhancement II (CE-II) non intercept engagement using a GBI launched from Vandenberg Air Force Base, California against an intermediate-range ballistic missile (IRBM)air-launched target with associated objects--Collected Critical Engagement Conditions (CEC) / Empirical Measurement Events (EME) data that validates Models and Simulations (M&S) -Initiated planning for Flight Test Ground-based Midcourse Defense-15 (FTG-15), a 3-stage Configuration 2 with Consolidated Booster Avionics Upgrade (C2/CBAU) intercept using a GBI launched from Vandenberg Air Force Base, California against a target with associated objects, launched from Reagan Test Site (RTS)					
FY 2016 Plans: -Conduct Flight Test Ground-based Midcourse Defense GM CTV-02+, a 3-stage Capability Enhancement II (CE-II) non-intercept engagement using a GBI launched from Vandenberg Air Force Base, California against an air launched IRBM with associated objects -Continue planning for Flight Test Ground-based Midcourse Defense-15 (FTG-15), a 3-stage C2/CBAU intercept engagement using a GBI launched from Vandenberg Air Force Base, California against an ICBM target with associated objects, launched from Reagan Test Site (RTS) --Collect Critical Engagement Conditions (CEC) / Empirical Measurement Events (EME) data that validates Models and Simulations (M&S) -Initiate planning for Flight Test Ground-based Midcourse Defense-11 (FTG-11), a 3-stage CE-I and 3-stage CE-II Salvo intercept using GBIs launched from Vandenberg Air Force Base, California against a target with associated objects, launched from Reagan Test Site (RTS)					
FY 2017 Plans: -Decrease from FY 2016 to FY 2017 is due to the Integrated Master Test Plan flight test changes.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2015	FY 2016	FY 2017
<p>-Conduct Flight Test Ground-based Midcourse Defense-15 (FTG-15), a 3-stage C2/CBAU intercept engagement using a GBI launched from Vandenberg Air Force Base, California against an ICBM target with associated objects, launched from Reagan Test Site (RTS)</p> <p>--Collect Critical Engagement Conditions (CEC) / Empirical Measurement Events (EME) data that validates Models and Simulations (M&S)</p> <p>-Continue planning for Flight Test Ground-based Midcourse Defense-11 (FTG-11), a 3-stage CE-I and 3-stage CE-II Salvo intercept using GBIs launched from Vandenberg Air Force Base, California against a target with associated objects, launched from Reagan Test Site (RTS)</p>				
<p>Title: Ground Test Execution</p> <p align="right">Articles:</p> <p>Description: Ground tests demonstrate and validate Warfighter tactics, techniques, and procedures. Ground tests are executed both in the Hardware-in-the-loop (HWIL) lab and in the field. HWIL lab tests integrate and assess Ballistic Missile Defense System (BMDS) system- level performance based on new element capabilities. Ground tests in the field use existing fielded element assets and tactical communication networks, to integrate, assess and demonstrate the element capabilities.</p> <p>FY 2015 Accomplishments:</p> <p>-Completed execution of BMDS Ground Test-04 test campaign to assess BMDS capabilities with integration of additional BMDS sensors</p> <p>-Continued to support planning and build-up activities of BMDS Ground Test-06 test campaign to assess BMDS capabilities with integration of additional BMDS assets including Ft. Drum, NY In-Flight Interceptor Communications System (IFICS) Data Terminal (IDT), and the Space-Based Infrared System (SBIRS) Increment 2 Change, and demonstrate GMD Fire Control (GFC) 6B3 capabilities using a lab based Hardware-in-the-Loop (HWIL) Configuration during Ground Test Integrated -06 (GTI-06)</p> <p>-Supported planning of BMDS Ground Test Distributed-06 (GTD-06) test campaign to assess BMDS capabilities and the mission functionality of the Ground-based Midcourse Defense (GMD) Fire Control (GFC) version 6B3 BMDS capabilities using fielded assets and long haul communications networks</p> <p>FY 2016 Plans:</p> <p>-Complete execution of BMDS Ground Test-06 test campaign to assess BMDS capabilities with integration of additional BMDS assets (Ft. Drum, NY In-Flight Interceptor Communications System (IFICS) Data Terminal (IDT), and the Space-Based Infrared System (SBIRS) Increment 2 Change), and demonstrate GMD Fire Control (GFC) 6B3 capabilities using a lab based Hardware-in-the-Loop (HWIL) Configuration during Ground Test Integrated -06 (GTI-06)</p> <p>-Complete execution of BMDS Ground Test Distributed-06 (GTD-06) test campaign to assess BMDS capabilities and the mission functionality of the Ground-based Midcourse Defense (GMD) Fire Control (GFC) version 6B3 BMDS capabilities using fielded assets and long haul communications networks</p>		8.388 -	5.775 -	6.386 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2015	FY 2016	FY 2017
<p>-Support early integration of BMDS Ground Test-07 (GT-07) in support of reducing risk associated with Command, Control, Battle Management Communications (C2BMC) (Spiral 8.2-1 and BMDS Overhead Persistent Infrared Architecture 5.1) and Ground System 6B3.2</p> <p>-Support planning of BMDS Ground Test-07 test campaign (GTI-07a) to assess BMDS capabilities and the mission functionality of the GMD Ground Systems version 6B3.2 BMDS capabilities for Future Sensor Utilization and Ground Systems (GS) Technology Refresh</p> <p>FY 2017 Plans:</p> <p>- Increase from FY 2016 to FY 2017 due to execution of GT-07 Ground Test Campaign</p> <p>-Continue to support planning and integration of BMDS Ground Test-07 test campaign (GTI-07a / GTD-07a / GTX-07b) to assess BMDS capabilities and the mission functionality of the GMD Ground Systems versions 6B3.2 / 7B BMDS capabilities for Future Sensor Utilization and Ground Systems (GS) Technology Refresh</p> <p>-Support execution of GTI-07a and GTD-07a to assess BMDS capabilities and the mission functionality of the GMD GS version 6B3.2 BMDS capabilities for Future Sensor Utilization and GS Technology Refresh</p> <p>-Support planning and integration of GTX-07b to assess BMDS capabilities and the mission functionality of the GMD GS version 7B BMDS capabilities for Robust Homeland Defense performance</p>				
Title: Program Operations		0.000	0.000	13.506
Articles:		-	-	-
Description: Program Operations provides for government management of the Ground-based Midcourse Defense (GMD) Test program. Included in this effort is program and business management, program administration, technical and testing oversight, quality / safety / mission assurance, integrated logistics support, and government manpower and infrastructure to test the GMD system and components.				
FY 2015 Accomplishments: N/A				
FY 2016 Plans: N/A				
FY 2017 Plans: -Increase from FY 2016 to FY 2017 due to realignment of Government Civilian Salaries and Contract Support Services for testing from the Program Operations accomplishment in PE Ballistic Missile Defense Midcourse Defense Segment (0603882C) MD08 Ground Based Midcourse project to PE 0604887C, Project MT08.				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017
-Provide technical and business management support activities, financial management, cost and schedule performance analysis, cost estimation and analysis, configuration management, and integration activities to the Program Director with critical program status and decision quality data -Ensure GMD test program compliance with internal and external direction, policies, and regulations to deliver critical capability within a consistent and disciplined process			
Accomplishments/Planned Programs Subtotals	78.463	61.777	53.192

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

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	863.965	1,269.913	862.080	-	862.080	701.311	585.079	600.710	535.614	Continuing	Continuing
• 0603914C: <i>Ballistic Missile Defense Test</i>	354.414	281.740	293.441	-	293.441	337.537	322.334	346.134	351.933	Continuing	Continuing
• 0603915C: <i>Ballistic Missile Defense Targets</i>	447.424	527.563	563.576	-	563.576	471.059	431.349	454.830	462.429	Continuing	Continuing
• 0604874C: <i>Improved Homeland Defense (HLD) Interceptors</i>	97.739	278.944	274.148	-	274.148	321.441	479.049	508.198	580.239	Continuing	Continuing

Remarks

D. Acquisition Strategy

The GMD program will continue to follow testing, development, and evolutionary acquisition through incremental development. The Agency acquisition strategy ensures that the GMD components are upgraded to improve both system performance and interceptor reliability in order to retain the proven GMD contribution to the BMDS. This acquisition approach minimizes the risk of parts availability, provides opportunities for incremental capability improvements, and allows decision makers to make informed trades between cost, schedule, and performance while exploring improved operational and technological capabilities.

GMD awarded a competitive Development and Sustainment Contract (DSC) on December 30, 2011. This contract continues development, fielding, test, systems engineering, integration, and configuration management; equipment manufacturing and upgrade; training, operations and sustainment of the GMD system and associated support facilities. The DSC emphasizes the application of performance-based tenets to provide timely high quality support of the core GMD system while reducing life cycle and long-term ownership costs. GMD's acquisition strategy for transition of the legacy content into the DSC provides uninterrupted field operations; development of both Ground Systems and Interceptor (GBI) products, including manufacturing additional interceptors to support both operations and testing; and the requirement to demonstrate war fighting capability through a rigorous ground and flight test program.

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E. Performance Metrics

N/A

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

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Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Resources - Engineering & Analysis - Industry Support	C/CPAF	Boeing : AL	0.000	2.423		1.851	Nov 2015	0.000		-		0.000	0	4.274	0
Resources - Engineering & Analysis - OGA Support	MIPR	AMRDEC : AL	0.000	2.389		1.709	Oct 2015	0.000		-		0.000	0	4.098	0
Resources - Government Infrastructure Support, Labs, and Communications	MIPR	VAFB : CA/AL/CO	0.000	6.662		6.769	Nov 2015	6.420	Nov 2016	-		6.420	Continuing	Continuing	Continuing
Resources - Prime Infrastructure Support, Labs, and Communications	C/CPAF	Boeing : AL/AK/AZ/CA/CO/OR/TX/VA	0.000	4.713		6.223	Nov 2015	7.776	Nov 2016	-		7.776	Continuing	Continuing	Continuing
Flight Test Execution - Planning and Silo Refurbishment	C/CPAF	Boeing : AL/AK/AZ/CA/CO/OR/TX/VA	0.000	38.264		15.836	Nov 2015	11.649	Nov 2016	-		11.649	Continuing	Continuing	Continuing
Flight Test Execution - Range, Resources, and Engineering	MIPR	VAFB/PMRF : CA/HI	0.000	15.624		23.614	Nov 2015	7.455	Nov 2016	-		7.455	Continuing	Continuing	Continuing
Ground Test Execution - Ground Test-04 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	0.000	3.355		0.000		0.000		-		0.000	0	3.355	0
Ground Test Execution - Ground Test-06 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	0.000	5.033		4.981	Nov 2015	0.258	Nov 2016	-		0.258	Continuing	Continuing	Continuing
Ground Test Execution - Ground Test-07 Campaign	C/CPAF	Boeing : AL/AK/AZ/CA/CO/TX/VA	0.000	0.000		0.794	Nov 2015	6.128	Nov 2016	-		6.128	Continuing	Continuing	Continuing
Subtotal			0.000	78.463		61.777		39.686		-		39.686	-	-	-

Remarks
N/A

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>
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Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations - Contract Support Services	C/CPFF	Various AL/AK / CA/CO/VA	0.000	0.000		0.000		7.563	Oct 2016	-		7.563	Continuing	Continuing	Continuing
Program Operations - Government Civilian Salaries	MIPR	MDA AL / VA	0.000	0.000		0.000		5.943	Oct 2016	-		5.943	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		13.506		-		13.506	-	-	-

Remarks
N/A

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	78.463	61.777	53.192	-	53.192	-	-	-

Remarks
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Missile Defense Agency		Date: February 2016
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity +

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
GTI-06 Part 3 (BMDS Ground Test)				+																								
GM CTV-02 Plus (GM, Intercept Flight Test)					△																							
GTI-06 Part 2 (BMDS Ground Test)						+																						
GTD-06 Part 2 (BMDS Ground Test)							+																					
FTG-15 (GM, Intercept Flight Test)								△																				
GTI-07a (BMDS Ground Test)									+																			
GTD-07a (BMDS Ground Test)										+																		
GTX-07b (BMDS Ground Test)											+																	
FTG-11 (IOT&E) (GM, Intercept Flight Test)												△																
GM CTV-03 (GM, Non-Intercept Flight Test)													△															
GTI-07b (BMDS Ground Test)														+														
GTD-07b Part 2 (BMDS Ground Test)															+													
FTG-17 (DT/OT) (GM, Intercept Flight Test)																△												
GTX-08 Part 2 (BMDS Ground Test)																	+											
FTG-18 (GM, Intercept Flight Test)																		△										
FTX-25 (SN, Target Only Flight Test)																			△									
GTI-08 (BMDS Ground Test)																				+								
GTD-08 Part 1 (BMDS Ground Test)																					+							
FTX-26 (SN, Target Only Flight Test)																						+						
FTO-04 (OTA, Intercept Flight Test)																											△	

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Missile Defense Agency		Date: February 2016
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Event	Start		End	
	Quarter	Year	Quarter	Year
GTI-06 Part 3 (BMDS Ground Test)	4	2015	4	2015
GM CTV-02 Plus (GM, Intercept Flight Test)	2	2016	2	2016
GTI-06 Part 2 (BMDS Ground Test)	3	2016	3	2016
GTD-06 Part 2 (BMDS Ground Test)	4	2016	4	2016
FTG-15 (GM, Intercept Flight Test)	1	2017	1	2017
GTI-07a (BMDS Ground Test)	3	2017	3	2017
GTD-07a (BMDS Ground Test)	4	2017	4	2017
GTX-07b (BMDS Ground Test)	1	2018	1	2018
FTG-11 (IOT&E) (GM, Intercept Flight Test)	1	2018	1	2018
GM CTV-03 (GM, Non-Intercept Flight Test)	3	2018	3	2018
GTI-07b (BMDS Ground Test)	3	2018	4	2018
GTD-07b Part 2 (BMDS Ground Test)	2	2019	2	2019
FTG-17 (DT/OT) (GM, Intercept Flight Test)	3	2019	3	2019
GTX-08 Part 2 (BMDS Ground Test)	1	2020	1	2020
FTG-18 (GM, Intercept Flight Test)	2	2020	2	2020
FTX-25 (SN, Target Only Flight Test)	3	2020	3	2020
GTI-08 (BMDS Ground Test)	3	2020	4	2020
GTD-08 Part 1 (BMDS Ground Test)	4	2020	4	2020
FTX-26 (SN, Target Only Flight Test)	3	2021	3	2021
FTO-04 (OTA, Intercept Flight Test)	3	2021	3	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency **Date:** February 2016

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GTI-06 Part 3 (BMDS Ground Test)	4	2015	4	2015
GM CTV-02 Plus (GM, Intercept Flight Test)	2	2016	2	2016
GTI-06 Part 2 (BMDS Ground Test)	3	2016	3	2016
GTD-06 Part 2 (BMDS Ground Test)	4	2016	4	2016
FTG-15 (GM, Intercept Flight Test)	1	2017	1	2017
GTI-07a (BMDS Ground Test)	3	2017	3	2017
GTD-07a (BMDS Ground Test)	4	2017	4	2017
GTX-07b (BMDS Ground Test)	1	2018	1	2018
FTG-11 (IOT&E) (GM, Intercept Flight Test)	1	2018	1	2018
GM CTV-03 (GM, Non-Intercept Flight Test)	3	2018	3	2018
GTI-07b (BMDS Ground Test)	3	2018	4	2018
GTD-07b Part 2 (BMDS Ground Test)	2	2019	2	2019
FTG-17 (DT/OT) (GM, Intercept Flight Test)	3	2019	3	2019
GTX-08 Part 2 (BMDS Ground Test)	1	2020	1	2020
FTG-18 (GM, Intercept Flight Test)	2	2020	2	2020
FTX-25 (SN, Target Only Flight Test)	3	2020	3	2020
GTI-08 (BMDS Ground Test)	3	2020	4	2020
GTD-08 Part 1 (BMDS Ground Test)	4	2020	4	2020
FTX-26 (SN, Target Only Flight Test)	3	2021	3	2021
FT0-04 (OTA, Intercept Flight Test)	3	2021	3	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MT08 / <i>Midcourse Test</i>

Note
Notes: CTV - Controlled Test Vehicle; GTI - Ground Test Integrated; GTD - Ground Test Distributed; GTX - Ground Test Exercise; GDEx - Global Defender Exercise; FTG - Flight Test Ground-Based Interceptor; FTO - Flight Test Operational; FTX - Flight Test Exercise

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
MD40: <i>Program Wide Support</i>	-	0.000	2.841	3.289	-	3.289	3.640	3.482	3.841	4.610	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Beginning FY 2016, Program Wide Support (PWS) was proportionately allocated to Ballistic Missile Defense Midcourse Defense Segment Test. In FY 2017, the PWS increase is a result of proportional reallocations based on a pro-rata basis of the adjusted RDT&E profile.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians, and Contract Support Services. This provides integrity and oversight of the BMDS as well as supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes Global Deployment personnel and support performing deployment site preparation and activation and, provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs includes: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; and similar operating expenses. PWS is allocated on a pro-rata basis and therefore, fluctuates by year based on the adjusted RDT&E profile (which excludes: 0305103C Cyber Security Initiative, 0603274C Special Programs, 0603913C Israeli Cooperative Program and 0901598C Management Headquarters).

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

	FY 2015	FY 2016	FY 2017
Title: Program Wide Support	0.000	2.841	3.289
Articles:	-	-	-
Description: N/A			
FY 2015 Accomplishments: - FY 2015 Accomplishments are captured in multiple RDT&E Program Elements under MD40 Budget Project			
FY 2016 Plans: - Beginning in FY 2016, Program Wide Support was redistributed across RDT&E Program Elements with a proportional allocation to Ballistic Missile Defense Midcourse Defense Segment Test - See paragraph A: Mission Description and Budget Item Justification			
FY 2017 Plans: - See paragraph A: Mission Description and Budget Item Justification.			
Accomplishments/Planned Programs Subtotals	0.000	2.841	3.289

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Wide Support - Agency Operations and Support Other Agency Services (MIPRs)	MIPR	Various : Multi: AL, VA	0.000	0.000		0.000		0.416	Aug 2017	-		0.416	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, VA	0.000	0.000		2.841		2.825	Aug 2017	-		2.825	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations Management	Allot	Various : Multi: AL, VA	0.000	0.000		0.000		0.048	Jun 2017	-		0.048	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		2.841		3.289		-		3.289	-	-	-

Remarks
N/A

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	2.841	3.289	-	3.289	-	-	-

Remarks
N/A

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

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity +
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity +

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
MD40 Program-Wide Support					☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆				

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Missile Defense Agency		Date: February 2016
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604887C / <i>Ballistic Missile Defense Midcourse Defense Segment Test</i>	Project (Number/Name) MD40 / <i>Program Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2016	4	2020