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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)					PE 0604878C / Aegis BMD Test							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	297.521	128.757	92.160	169.822	-	169.822	76.270	149.764	137.058	147.923	Continuing	Continuing
MT09: AEGIS BMD Test	291.098	119.715	88.937	163.861	-	163.861	73.148	144.099	132.646	141.902	Continuing	Continuing
MD40: Program Wide Support	6.423	9.042	3.223	5.961	-	5.961	3.122	5.665	4.412	6.021	Continuing	Continuing
Program MDAP/MAIS Code: 362												
Note												
Increase in FY 2020 from PB19 to PB20 is in accordance with the Integrated Master Test Plan (IMTP) 20.1. This PE also provides transition of flight test execution support costs from PE 0603892C Aegis BMD to ensure continued transparency and program efficiency.												
A. Mission Description and Budget Item Justification												
The Aegis Ballistic Missile Defense (BMD) mission is to deliver an enduring, operationally effective, and supportable BMD capability to defend the nation, deployed forces, friends, and allies and to increase this capability by delivering evolutionary improvements as part of Ballistic Missile Defense System (BMDS) upgrades. The Aegis BMD element of the BMDS capitalizes upon and evolves from the existing U.S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges and the ability to destroy Short-Range Ballistic Missiles (SRBMs), Medium-Range Ballistic Missiles (MRBMs), and Intermediate-Range Ballistic Missiles (IRBMs) in the midcourse phase of flight in addition to shorter range missiles in the terminal phase of flight. Aegis BMD also provides a Long Range Surveillance and Track (LRS&T) capability to the BMDS. Upgrades to both the Aegis BMD Weapon System and the SM-3 configuration enable Aegis BMD to provide effective and supportable defensive capability against longer range more sophisticated threats and an enduring Aegis Ashore defensive capability.												
- Working with all U.S. Armed Services that participate in the BMDS level Operational Test Agency (OTA) Team, with the support of the Director of Operational Test and Evaluation (DOT&E), MDA has developed a test program to improve confidence in missile defense capabilities under development and ensure the capabilities transferred to the warfighter are operationally effective, suitable, and survivable.												
- As part of the MDA's rigorous test program, System Pre-Flight predictions provide confidence in test execution by predicting element performance and exercising element interfaces. System Post-Flight Reconstruction replicates the BMDS configuration, actual environmental conditions, and target dynamics observed in flight to anchor Modeling and Simulation (M&S) results.												
- The IMTP is event-oriented and extends until the collection of all identified data is completed ensuring adequate test investments.												

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Missile Defense Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	137.783	95.756	80.684	-	80.684
Current President's Budget	128.757	92.160	169.822	-	169.822
Total Adjustments	-9.026	-3.596	89.138	-	89.138
• Congressional General Reductions	-11.300	-3.596			
• Congressional Directed Reductions	-5.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	25.700	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-6.413	0.000			
• SBIR/STTR Transfer	-0.014	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	-11.999	0.000	89.138	-	89.138

**Change Summary Explanation**

Decrease in FY 2018 from PB19 to PB20 reflects the enacted congressional adjustments for flight test delays and general reductions

Decrease in FY 2019 from PB19 to PB20 is in accordance with the Integrated Master Test Plan (IMTP)

Increase in FY 2020 from PB19 to PB20 is in accordance with the Integrated Master Test Plan (IMTP) 20.1. This PE also provides transition of flight test execution support costs from PE 0603892C Aegis BMD to ensure continued transparency and program efficiency.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MT09: AEGIS BMD Test	291.098	119.715	88.937	163.861	-	163.861	73.148	144.099	132.646	141.902	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## Note

Increase in FY 2020 from PB19 to PB20 is in accordance with the Integrated Master Test Plan (IMTP) 20.1. This PE also provides transition of flight test execution support costs from PE 0603892C Aegis BMD to ensure continued transparency and program efficiency.

## A. Mission Description and Budget Item Justification

The FY 2020 Aegis BMD Test Program concentrates on critical IMTP flight tests that support the BMDS incremental development strategy and the U.S. Navy, European Phased Adaptive Approach (EPAA).

The FY 2019 Aegis BMD Test Program concentrates on critical IMTP flight tests that support the U.S. Navy and European Phased Adaptive Approach (EPAA), Weapon System Certification, and Missile Production Decision requirements. Aegis BMD will concentrate on Aegis Baseline (BL) 9.C2 (BMD 5.x) and Standard Missile SM-3 Block IIA operational testing.

- Working with the U.S. Navy Integrated Warfare System (IWS) Services' Operational Test Agencies (OTA), with the support of the Director of Operational Test and Evaluation (DOT&E), MDA has developed a test program to improve missile defense capabilities under development and ensure the capabilities transferred to the warfighter are operationally effective, suitable, and survivable
- As part of MDA's rigorous test program, System Pre-Flight predictions provide confidence in test execution by predicting element performance and exercising element interfaces. System Post-Flight Reconstruction replicates the Ballistic Missile Defense System configuration and actual environmental conditions and target dynamics observed in flight to anchor M&S results
- The IMTP is event-oriented and extends until the collection of all identified data is completed ensuring adequate test investments

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Aegis BMD Flight Test Execution	64.194	33.707	106.315
<b>Articles:</b>	-	-	-
<b>Description:</b> Aegis BMD Flight Test Program performs comprehensive testing of Aegis BMD components and their interoperability with the BMDS using accredited Modeling & Simulation (M&S) that provides the evidence required for the MDA and Combatant Commanders to transition the capability to the Operational Capacity Baseline. All flight testing is reflected in the R4 and IMTP. Recurring Accomplishments include: -Prepare for and conduct BMDS Flight Test events as reflected in the IMTP and the R-4 schedule. -Collect Aegis BMD data for Modeling and Simulation anchoring used in comprehensive flight testing.			

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<b>Appropriation/Budget Activity</b> 0400 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>		<b>Project (Number/Name)</b> MT09 / <i>AEGIS BMD Test</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>-Conduct Aegis BMD specific analysis during pre- and post-mission analysis phases to confirm pre-mission predictions of mission success and validate post-test results.</p> <p>-Conduct test milestone reviews to ensure readiness for test execution and accomplishment of test objectives.</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2019 Plans:</b> Support of flight tests scheduled in the IMTP and Aegis BMD 5.0 with Counter Measures. These operational tests support the U.S. Navy, BMDS Increment 5 - Robust IRBM Defense, and the EPAA for the defense of Europe.</p> <p><b>FY 2020 Plans:</b> - Complete test event data collection, conduct post-test analysis supporting assessments and fielding decisions for BMDS Testing - Prepare for and execute Flight Tests scheduled in the IMTP</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Increase from FY 2019 to FY 2020 is in accordance with the Integrated Master Test Plan (IMTP) 20.1 and reflects transition of flight test execution support costs from PE 0603892C Aegis BMD to this PE to ensure continued transparency and program efficiency</p>					
<p><b>Title:</b> Aegis BMD Ground Test Execution</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> Aegis BMD Ground Test Program performs comprehensive testing of Aegis BMD Components and their interoperability with the BMDS using accredited M&amp;S that provides the evidence required for the MDA and Combatant Commanders to transition the capability to the Operational Capacity Baseline. More specifically, ground testing is used to collect data for Aegis BMD characterization and assessment, flight test risk reduction, and exploration of scenarios where flight testing is either impracticable or impossible.</p> <p>Recurring Accomplishments include:</p> <p>-Participate in BMD System Ground Tests to include pre-mission analysis, mission execution, and post-mission analysis.</p> <p>-Conduct planning to ensure BMDS Test Site (BTS) capabilities support Aegis BMD testing, exercises, flight tests, and demonstration requirements. This includes upgrades to the ground testing labs to ensure compliance with operational and test baselines.</p> <p>-Continue testing of U.S. Navy C4I systems and Aegis BMD baselines to ensure BMDS interoperability.</p> <p>-Continue to participate in System Level Ground Testing as an element of the layered BMDS to collect data for Aegis BMD characterization and assessment and exploration of scenarios where flight testing is either impracticable or impossible.</p> <p>-Continue operation support of HWIL M&amp;S for Element ground testing.</p> <p>-Prepare and conduct a Hardware Ground Test of cooled gas Attitude Control System (ACS).</p>			17.561 -	24.339 -	18.504 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>-Aegis BMD HWIL lab participation align to the IMTP Ground Test schedule and early integration to provide risk reduction for Ground Test runs for the record and implementation of CI/CAT CONOPS pathfinders.</p> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2019 Plans:</b></p> <p>- SEE ABOVE.</p> <p><b>FY 2020 Plans:</b></p> <p>- Prepare and execute Ground Test (GT) support activities specific to IMTP v 20.1.</p> <p>- Conduct ground and flight testing to improve the missile defense capabilities and ensure the capabilities transferred to the warfighter are effective.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> <p>Decrease from FY 2019 to FY 2020 reflects Aegis BMD HWIL lab participation aligned to the IMTP Ground Test schedule.</p>					
<p><b>Title:</b> Aegis BMD Test Resources</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This effort provides resources to conduct ground and flight testing to improve confidence in missile defense capabilities under development and ensure the capabilities transferred to the warfighter are operationally effective, suitable, and survivable.</p> <p>Recurring Accomplishments include:</p> <ul style="list-style-type: none"> <li>- Provide Core Test and Evaluation support for Aegis BMD test and evaluation missions and laboratories, field activities, range support activities, analysis activities, and shipboard and land-based test site test teams.</li> <li>- Provide Test &amp; Evaluation (T&amp;E) infrastructure support for Aegis BMD Test Missions as reflected in the IMTP to collect truth data for post-event analysis.</li> <li>- Conduct core Element M&amp;S validation and accreditation activities.</li> <li>- Exercise tactical communications during testing to ensure interoperability with the BMDS and Combatant Command (CCMD) systems.</li> <li>- Continue core test planning for Aegis BMD test missions to include assessment of target requirements, development of M&amp;S, and preparation of the range to ensure all missions are executable and apply to the technical program objectives.</li> <li>- Develop and execute risk-reduction activities to minimize or mitigate shipboard and missile test and programs risks.</li> <li>- Develop and execute data collection plans and supporting instrumentation requirements.</li> </ul> <p>Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2019 Plans:</b></p>			25.130 -	18.508 -	17.287 -

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
Maintain core test and evaluation capability. Conduct ground and flight testing to improve the missile defense capabilities and ensure the capabilities transferred to the warfighter are effective. Begin Continuous Integration implementation in preparation for Continuous Agile Testing.  <b>FY 2020 Plans:</b> SEE ABOVE.  <b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> N/A					
<b>Title:</b> Engineering & Analysis			12.830	12.383	13.686
<b>Articles:</b>  <b>Description:</b> The Engineering and Analysis effort provides essential BMDS ground and flight test event planning, execution, and evaluation activities for each test event. Recurring Accomplishments: <ul style="list-style-type: none"> <li>- Design test architecture, define test objectives and evaluation criteria, define target requirements, and generate ground and flight test scenarios appropriate to the data collection requirements to assess BMDS performance and anchor M&amp;S.</li> <li>- Coordinate with BMDS Operational Test Agency (OTA) to address, coordinate, and disposition test issues to achieve closure through recommended action plans.</li> <li>- Deliver HWIL M&amp;S integration test cases.</li> <li>- Conduct M&amp;S HWIL integration benchmarking, and integrate the BMDS HWIL M&amp;S framework with MDA and non-MDA Elements into the test event BMDS architecture.</li> <li>- Integrate, test, and deliver end-to-end BMDS simulations supporting ground test missions.</li> <li>- Analyze System-level interoperability.</li> <li>- Conduct modeling and technical analysis for Combatant Command wargames and exercises.</li> <li>- Utilize M&amp;S for pre-test assessment, post-test review, and M&amp;S updates.</li> <li>- Provide test configuration management; risk assessments; and anomaly/deficiency review, assessment and closure.</li> <li>- Analyze test results to identify verification and validation data collection shortfalls and reassign objectives to future test events as required.</li> <li>- Document BMDS test observations for system-level test anomalies and coordinate the resulting BMDS Discrepancy Reports within the Failure Reporting, Analysis, and Corrective Action System (FRACAS)</li> <li>- Provide the Quick Look Brief, Mission Data Review (MDR), and Executive MDR.</li> <li>- Provide long-range BMDS IMTP planning and integration strategies related to overarching BMDS analysis product integration.</li> <li>- Upgrade test analysis tools in concert with the BMDS evolution (e.g., Modular Analysis and Reporting Suite (MARS)) to enhance analysis capability and efficiency.</li> <li>- Populate the MARS database with data from the most recently completed tests to support as-built analysis and capability assessments.</li> </ul>			-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test			Project (Number/Name) MT09 / AEGIS BMD Test				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2018	FY 2019	FY 2020
<p>- Provide engineering analysis process software, to include System Coordination and Observation Reporting Environment (SCORE), Software Change Analysis Review Environment (SCARE), File Manager (FileMan), and ManPower Loading (MPL). Specific and/or unique accomplishments to each FY are as follows:</p> <p><b>FY 2019 Plans:</b> Aligned to IMTP events.</p> <p>- Validate test event data collection and conduct post-test analyses supporting assessments and fielding decisions for BMDS Increments 5 and 6A</p> <p><b>FY 2020 Plans:</b> - Conduct system pre-mission testing and analyses for FTO-03.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Increase in FY 2019 to FY 2020 in accordance with the Integrated Master Test Plan (IMTP)</p>												
<p><b>Title:</b> Test Program Operations</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This activity funds the Government and contractor workforce that manage the overall Aegis Ballistic Missile Defense (BMD) program and enables the program to develop, build, and test standard missiles and the associated Aegis Weapon Systems. This project includes all operations support for the Aegis program office in Engineering and Testing.</p> <p><b>FY 2019 Plans:</b> N/A</p> <p><b>FY 2020 Plans:</b> -SEE ABOVE</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Increase from FY 2019 to FY 2020 provides transition of flight test related program management costs from PE 0603892C Aegis BMD to this PE to ensure continued transparency and program efficiency</p>										0.000 -	0.000 -	8.069 -
Accomplishments/Planned Programs Subtotals										119.715	88.937	163.861
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost	
• 0603892C: AEGIS BMD	798.395	741.076	727.479	-	727.479	718.949	703.473	505.529	527.720	Continuing	Continuing	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Missile Defense Agency										<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 4				<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>				<b>Project (Number/Name)</b> MT09 / <i>AEGIS BMD Test</i>			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 0604880C: <i>Land Based SM-3 (LBSM3)</i>	29.652	27.692	38.352	-	38.352	36.348	28.029	22.733	30.463	Continuing	Continuing
• 0604881C: <i>AEGIS SM-3 Block IIA Co-Development</i>	9.531	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.531
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
N/A											
<b>E. Performance Metrics</b>											
N/A											



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Aegis BMD Flight Test Execution - Aegis BMD 5.x Development - MD09 - 20117142323680	MIPR	NSWC/DD : Dahlgren VA	0.000	0.000		0.000		2.179	Nov 2019	-		2.179	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD 5.x Development - MD09 - 20117142323689	SS/CPAF	Lockheed Martin : Moorestown NJ	0.000	0.000		0.000		7.752	Nov 2019	-		7.752	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD 5.x Development - MD09 - Various	MIPR	Various : MA, MD, VA, NJ	0.000	0.000		0.000		1.005	Nov 2019	-		1.005	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution	MIPR	Various - DT : HI,VA,CA,MA,NC	0.000	0.000		4.790	Dec 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - Flight Test Execution - ARMY- SMDC	MIPR	Army : SMDC	0.000	3.056	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - Flight Test Execution - DOT MARAD	MIPR	DOT : MARAD	0.000	5.084	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - Flight Test Execution - MT09 - SECOTEC	SS/CPFF	SECOTEC : Huntsville AL	0.000	2.166	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09 - CPF	MIPR	COMPACTFLT : HI	0.000	0.330	Dec 2017	1.300	Dec 2018	4.703	Dec 2019	-		4.703	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD	SS/CPFF	Corvid : NC	1.911	2.097	Dec 2017	0.560	Dec 2018	2.058	Dec 2019	-		2.058	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test Execution - MT09 - Corvid															
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09 -JHU/APL	SS/CPFF	JHU/APL : Columbia MD	9.594	4.137	Dec 2017	4.750	Dec 2018	6.200	Dec 2019	-		6.200	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09- Corona	MIPR	NSWC Corona : CA	5.461	4.668	Dec 2017	1.770	Dec 2018	5.173	Dec 2019	-		5.173	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-DMEA	MIPR	DMEA : McClellan, CA	0.000	0.000		0.400	Dec 2018	1.566	Dec 2019	-		1.566	0.000	1.966	0.000
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-L3 Communications	C/CPFF	L3 Communications : Waco, TX	0.824	3.022	Dec 2017	1.430	Dec 2018	2.803	Dec 2019	-		2.803	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-NAWC/AD	MIPR	NAWC/AD-PHX Air : Pax River, MD	2.938	2.693	Dec 2017	1.870	Dec 2018	2.273	Dec 2019	-		2.273	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-NAWC/PM	MIPR	NAWC/PM : Pt. Mugu, CA	3.108	6.860	Dec 2017	0.060	Dec 2018	5.463	Dec 2019	-		5.463	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-NRL	MIPR	Naval Research Lab : Washington, DC	0.000	0.135	Dec 2017	0.860	Dec 2018	0.890	Dec 2019	-		0.890	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-NSWC DD	MIPR	NSWC Dahlgren : Dahlgren, VA	2.793	2.763	Dec 2017	0.670	Dec 2018	7.073	Dec 2019	-		7.073	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD	MIPR	NSWC Carderock : Potomac, MD	0.248	1.404	Dec 2017	6.820	Dec 2018	7.670	Dec 2019	-		7.670	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test Execution - MT09-NSWCCR															
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-PHD	MIPR	NSWC PHD : Pt. Hueneme, CA	8.307	1.100	Dec 2017	6.190	Dec 2018	8.300	Dec 2019	-		8.300	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-PMRF	MIPR	PMRF Barking Sands : Kauai, HI	11.765	8.735	Dec 2017	0.410	Dec 2018	15.642	Dec 2019	-		15.642	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-SSCPAC	MIPR	SPAWAR : San Diego, CA	1.792	1.684	Dec 2017	1.150	Dec 2018	5.406	Dec 2019	-		5.406	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-Various	MIPR	Various : HI, VA, CA, MA, NC, NJ, AZ	63.300	10.633	Dec 2017	0.327	Dec 2018	7.886	Dec 2019	-		7.886	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Aegis BMD Flight Test Execution - MT09-Xontech	C/CPFF	Xontech : Colorado Spring, CO	0.000	1.155	Dec 2017	0.350	Dec 2018	1.656	Dec 2019	-		1.656	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Flight Test Execution	SS/CPFF	Lockheed Martin : NJ	12.307	2.472	Dec 2017	0.000		0.000		-		0.000	0.000	14.779	0.000
Aegis BMD Flight Test Execution - Flight Test Execution - RMS	SS/CPFF	Raytheon : AZ	9.494	0.000		0.000		0.000		-		0.000	0.000	9.494	0.000
Aegis BMD Flight Test Execution - Standard Missile - 3 (SM-3) Block IIA Development - Block IIA Flight Test Support - Various	MIPR	Various : CA, VA, MD	0.000	0.000		0.000		1.100	Nov 2019	-		1.100	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Standard	SS/CPIF	Raytheon : Tucson AZ	0.000	0.000		0.000		8.017	Apr 2020	-		8.017	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Missile - 3 (SM-3) Block IIA Development - MT09 - SM-3 BLK IIA Flight Test Support															
Aegis BMD Flight Test Execution - Standard Missile - 3 (SM-3) Block IIA Development - MT09 - SM-3 BLK IIA Flight Test Support - DD	MIPR	NSWC DD : Dahlgren VA	0.000	0.000		0.000		0.500	Nov 2019	-		0.500	Continuing	Continuing	Continuing
Aegis BMD Flight Test Execution - Standard Missile - 3 (SM-3) Block IIA Development - MT09 - SM-3 BLK IIA Flight Test Support APL	MIPR	JHU/APL : Laurel MD	0.000	0.000		0.000		1.000	Dec 2019	-		1.000	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - ATK	MIPR	ATK : Elkton MD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	0.000
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - NSWCCD	MIPR	NSWC Dahlgren : Dahlgren VA	0.000	0.353	Nov 2017	1.604	Dec 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 -Navy	MIPR	PEO : IWS	0.000	0.146	Nov 2017	0.202	Dec 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - CORONA	MIPR	NSWC Corona : CA	2.100	0.695	Nov 2017	0.782	Dec 2018	1.982	Dec 2019	-		1.982	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - JHU/APL MDA	SS/CPFF	JHU/APL : MDA	0.500	2.700	Nov 2017	3.355	Dec 2018	2.480	Dec 2019	-		2.480	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - LM	MIPR	Lockheed Martin : Moorestown, NJ	16.515	7.529	Nov 2017	10.900	Dec 2018	3.731	Dec 2019	-		3.731	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - PHD	MIPR	NSWC PHD : Pt. Hueneme, CA	1.334	0.866	Nov 2017	0.920	Dec 2018	3.156	Dec 2019	-		3.156	Continuing	Continuing	Continuing
Aegis BMD Ground Test Execution - Aegis BMD Ground Test Execution - MT09 - SSCPAC	MIPR	SPAWAR : San Diego, CA	11.940	5.272	Nov 2017	6.576	Dec 2018	7.155	Dec 2019	-		7.155	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - DT - Various	MIPR	Various : HI, VA, CA, MA, MD	0.000	0.587	Nov 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - APL	SS/CPFF	JHU/APL : Columbia MD	29.784	1.500	Nov 2017	6.405	Dec 2018	2.500	Dec 2019	-		2.500	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - Aegis	MIPR	Aegis BMD : VA	0.745	1.626		0.000		0.000		-		0.000	0.000	2.371	0.000
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - CORONA	MIPR	NSWC Corona : CA	11.346	4.863	Nov 2017	2.865	Dec 2018	4.000	Dec 2019	-		4.000	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - NAWC/PM	MIPR	NAWC/PM : Pt. Mugu, CA	2.000	0.875	Nov 2017	0.594	Dec 2018	0.850	Dec 2019	-		0.850	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - NSWCCD	MIPR	NSWC Dahlgren : Dahlgren, VA	10.831	2.581	Nov 2017	2.507	Dec 2018	2.500	Dec 2019	-		2.500	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - PHD	MIPR	NSWC PHD : Pt. Hueneme, CA	14.265	5.150	Nov 2017	2.865	Dec 2018	4.865	Dec 2019	-		4.865	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - PMRF	MIPR	PMRF Barking Sands : Kauai, HI	2.375	0.500	Nov 2017	0.981	Dec 2018	0.430	Dec 2019	-		0.430	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - SSCPAC	MIPR	SPAWAR : San Diego, CA	6.122	1.910	Nov 2017	1.289	Dec 2018	1.089	Dec 2019	-		1.089	Continuing	Continuing	Continuing
Aegis BMD Test Resources - Aegis BMD Test Resources - MT09 - Various	MIPR	Various : HI, VA, CA, MA, MD	10.850	5.538	Nov 2017	1.002	Dec 2018	1.053	Dec 2019	-		1.053	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis	TBD	Teledyne Brown Engineering : Huntsville ,AL	0.000	0.000		0.000		4.500	Nov 2019	-		4.500	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis - Engineering & Analysis - Engineering Support	C/CPAF	Northrop Grumman : AL, CO	4.223	2.160	Nov 2017	2.121	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis - Engineering & Analysis - FFRDC/UARC	MIPR	Various : AL, CO, VA	12.514	2.305	Nov 2017	2.347	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis - Engineering & Analysis - Industry	C/CPAF	Boeing : AL	3.696	0.000		0.000		0.000		-		0.000	0.000	3.696	0.000
Engineering & Analysis - Engineering & Analysis - Engineering & Analysis - OGA	MIPR	AMRDEC : AL	15.494	6.565	Nov 2017	6.411	Nov 2018	2.065	Nov 2019	-		2.065	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MT09 / AEGIS BMD Test					
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Analysis - Engineering & Analysis - NME	C/CPAF	Northrop Grumman-JRDC : CO, AL	0.000	0.500	Nov 2017	0.000		5.387	Nov 2019	-		5.387	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis NME Support	MIPR	SPAWAR : CA	0.622	1.300	Nov 2017	1.504	Nov 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis-Various	Various	Various : Huntsville, AL	0.000	0.000		0.000		1.734	Nov 2019	-		1.734	Continuing	Continuing	Continuing
Test Program Operations - Program Operations - MT09 - Civ Salary	MIPR	MDA : Arlington VA	0.000	0.000		0.000		2.343	Nov 2019	-		2.343	Continuing	Continuing	Continuing
Test Program Operations - Program Operations - MT09 - MDA Travel	MIPR	MDA : Arlington VA	0.000	0.000		0.000		0.475	Nov 2019	-		0.475	Continuing	Continuing	Continuing
Test Program Operations - Program Operations - MT09 - MIDAESS	MIPR	MDA : Arlington VA	0.000	0.000		0.000		4.570	Nov 2019	-		4.570	Continuing	Continuing	Continuing
Test Program Operations - Program Operations - MT09 - NAVSEA Civ Sal	MIPR	NAVSEA : Washington DC	0.000	0.000		0.000		0.681	Nov 2019	-		0.681	Continuing	Continuing	Continuing
Subtotal			291.098	119.715		88.937		163.861		-		163.861	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			291.098	119.715		88.937		163.861		-		163.861	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency										Date: March 2019																					
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test										Project (Number/Name) MT09 / AEGIS BMD Test											
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 ◇											
										FY 2018		FY 2019			FY 2020			FY 2021			FY 2022			FY 2023			FY 2024				
GTI-07b E/C (BMDS Ground Test)										◆	◆																				
GTI-18 Sprint 3												◇	◇	◇																	
FTM-45													◆																		
FTI-03													◆																		
FTG-11														◇																	
GTI-19 Sprint 1															◇																
GTD-07b																◇															
GTI-19 Sprint 2																	◇														
FS-19																		◇													
FTM-44 SMPT																			◇												
GTI-07c (N/P) (BMDS Ground Test)																				◇											
GT-20 Sprint (BL 5.4) (BMDS Ground Test)																						◇									
FTM-44																							◇								
GTD-07b (AA) (BMDS Ground Test)																									◇						
FTO-03 (OTA, OT Intercept Flight Test)																															
FTM-30																															
GTI-08 (N/P) (BMDS Ground Test)																															
GTI-09 Sprint 1 (E/C) (BMDS Ground Test)																															
GTD-08																															
GTI-ISR (21) (BMDS Ground Test)																															
GTI-09 Sprint 2 (E/C) (BMDS Ground Test)																															
FS-21																															
GTI-10 Sprint 1 (E/C) (BMDS Ground Test)																															
GTI-11 Sprint 1 (N/P) (BMDS Ground Test)																															



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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency															Date: March 2019														
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test										Project (Number/Name) MT09 / AEGIS BMD Test									
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 ◇									
										FY 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
GTI-10 Sprint 2 (E/C) (BMDS Ground Test)																													
FTX-40 (AEGIS 5.1, DT Tracking Exercise Flight Test)																													
FTM-38																													
GTI-11 Sprint 2 (N/P) (BMDS Ground Test)																													
FTM-37																													
GTD-10 (E/C) (BMDS Ground Test)																													
GTI-11 Sprint 3 (N/P) (BMDS Ground Test)																													
GTI-ISR (23) (BMDS Ground Test)																													
GT-ISR (23)																													
FTM-43 (AEGIS 5.1, DT/OT Intercept Flight Test)																													
FS-23																													
GTD-11 (N/P) (BMDS Ground Test)																													
FTX-38																													
GTI-12 Sprint 1 (E/C) (BMDS Ground Test)																													
FTM-40																													
GTI-13 Sprint 1 (N/P) (BMDS Ground Test)																													
FTM-41																													
GTI-12 Sprint 2 (E/C) (BMDS Ground Test)																													

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2020 Missile Defense Agency			<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>	<b>Project (Number/Name)</b> MT09 / <i>AEGIS BMD Test</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
GTI-07b E/C (BMDS Ground Test)	2	2018	3	2018
GTI-18 Sprint 3	4	2018	2	2019
FTM-45	1	2019	1	2019
FTI-03	1	2019	1	2019
FTG-11	2	2019	2	2019
GTI-19 Sprint 1	3	2019	3	2019
GTD-07b	3	2019	3	2019
GTI-19 Sprint 2	3	2019	3	2019
FS-19	3	2019	3	2019
FTM-44 SMPT	4	2019	4	2019
GTI-07c (N/P) (BMDS Ground Test)	1	2020	1	2020
GT-20 Sprint (BL 5.4) (BMDS Ground Test)	2	2020	2	2020
FTM-44	2	2020	2	2020
GTD-07b (AA) (BMDS Ground Test)	3	2020	3	2020
FTO-03 (OTA, OT Intercept Flight Test)	4	2020	4	2020
FTM-30	4	2020	4	2020
GTI-08 (N/P) (BMDS Ground Test)	4	2020	1	2021
GTI-09 Sprint 1 (E/C) (BMDS Ground Test)	1	2021	2	2021
GTD-08	2	2021	2	2021
GTI-ISR (21) (BMDS Ground Test)	3	2021	3	2021
GTI-09 Sprint 2 (E/C) (BMDS Ground Test)	3	2021	3	2021
FS-21	4	2021	4	2021
GTI-10 Sprint 1 (E/C) (BMDS Ground Test)	2	2022	2	2022

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2020 Missile Defense Agency **Date:** March 2019

<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>	<b>Project (Number/Name)</b> MT09 / <i>AEGIS BMD Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
GTI-11 Sprint 1 (N/P) (BMDS Ground Test)	3	2022	3	2022
GTI-10 Sprint 2 (E/C) (BMDS Ground Test)	4	2022	4	2022
FTX-40 (AEGIS 5.1, DT Tracking Exercise Flight Test)	4	2022	4	2022
FTM-38	4	2022	4	2022
GTI-11 Sprint 2 (N/P) (BMDS Ground Test)	1	2023	1	2023
FTM-37	1	2023	1	2023
GTD-10 (E/C) (BMDS Ground Test)	2	2023	2	2023
GTI-11 Sprint 3 (N/P) (BMDS Ground Test)	3	2023	3	2023
GTI-ISR (23) (BMDS Ground Test)	3	2023	3	2023
GT-ISR (23)	3	2023	3	2023
FTM-43 (AEGIS 5.1, DT/OT Intercept Flight Test)	4	2023	4	2023
FS-23	4	2023	4	2023
GTD-11 (N/P) (BMDS Ground Test)	4	2023	1	2024
FTX-38	1	2024	1	2024
GTI-12 Sprint 1 (E/C) (BMDS Ground Test)	2	2024	2	2024
FTM-40	2	2024	2	2024
GTI-13 Sprint 1 (N/P) (BMDS Ground Test)	3	2024	3	2024
FTM-41	3	2024	3	2024
GTI-12 Sprint 2 (E/C) (BMDS Ground Test)	4	2024	4	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MD40 / Program Wide Support			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
MD40: Program Wide Support	6.423	9.042	3.223	5.961	-	5.961	3.122	5.665	4.412	6.021	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.

**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 personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: 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 across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Program Wide Support	9.042	3.223	5.961
<b>Articles:</b>	-	-	-
<p><b>Description:</b> 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 personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: 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 across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.</p>			
<b>FY 2019 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Missile Defense Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604878C / <i>Aegis BMD Test</i>	<b>Project (Number/Name)</b> MD40 / <i>Program Wide Support</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2018</b>	<b>FY 2019</b>
- SEE ABOVE.  <b><i>FY 2020 Plans:</i></b> - SEE ABOVE.  <b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> Increase from FY 2019 to FY 2020 reflects the PWS allocation on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.			
<b>Accomplishments/Planned Programs Subtotals</b>		9.042	3.223
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test				Project (Number/Name) MD40 / Program Wide Support					
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Wide Support - Agency Operations Management	Allot	Various : Multi: AL, VA	0.117	0.528	Jul 2018	0.049	Jul 2019	0.089	Jul 2020	-		0.089	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations User Services	C/CPAF	Various : Multi: AL, CA, CO, VA	0.000	0.000		0.000		0.324	Dec 2019	-		0.324	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Allot	Various : MDA Multi: AL, CO, CA, VA,	2.353	5.908	Nov 2017	2.500	Oct 2018	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services (FFP)	C/FFP	Various : Multi: AL, CA, CO, VA	3.952	2.552	Jun 2018	0.674	Apr 2019	5.548	Apr 2020	-		5.548	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services (MIPR)	MIPR	Various : Multi: AL, CA, CO, VA	0.001	0.054	Dec 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			6.423	9.042		3.223		5.961		-		5.961	Continuing	Continuing	N/A
Remarks N/A															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			6.423	9.042		3.223		5.961		-		5.961	Continuing	Continuing	N/A
Remarks Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Missile Defense Agency														Date: March 2019															
Appropriation/Budget Activity 0400 / 4										R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test										Project (Number/Name) MD40 / Program Wide Support									
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 2018		FY 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024							
MD40 Program-Wide Support										◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇	◇						

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604878C / Aegis BMD Test	Project (Number/Name) MD40 / Program Wide Support

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2018	4	2024