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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Missile Defense Agency **Date:** February 2020

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 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	215.695	48.401	51.532	49.560	-	49.560	51.735	51.059	53.133	54.023	Continuing	Continuing
MD03: <i>Joint Warfighter Support</i>	104.989	14.914	16.904	14.903	-	14.903	16.336	15.018	15.399	15.332	Continuing	Continuing
MT03: <i>Joint Warfighter Support Test</i>	95.161	31.132	32.278	32.531	-	32.531	33.187	33.826	34.848	35.574	Continuing	Continuing
MC03: <i>Cyber Operations</i>	0.146	0.150	0.156	0.157	-	0.157	0.159	0.162	0.167	0.170	0.000	1.267
MD40: <i>Program-Wide Support</i>	15.399	2.205	2.194	1.969	-	1.969	2.053	2.053	2.719	2.947	Continuing	Continuing

Program MDAP/MAIS Code: 362

Note

N/A

A. Mission Description and Budget Item Justification

The Joint Warfighter Support Program (JWSP) is Missile Defense Agency's (MDA's) primary means for providing direct technical support to Combatant Commands (CCMDs), the Military Services and the Joint Staff on Ballistic Missile Defense System (BMDS) development, testing, and operational support, to include Real World testing and validation of the warfighter's operational Common Integration Broadcast (CIB). It enables delivery of BMDS capabilities to Warfighters and ensures their participation in identification and development of new Ballistic Missile Defense (BMD) capabilities via the Warfighter Involvement Process (WIP). The JWSP allows the Warfighter and Missile Defense Agency to work together to identify gaps, seams, and needs in warfighting capability and enhance BMDS attributes by submitting modification and fielding requests. It also provides 24 hours a day, 7 days a week, 365 days a year BMD operational support to Warfighters worldwide. The program enables rapid response to Warfighter Requests for Information (RFIs) and Requests for Analyses (RFAs), which are especially critical to mission success in protecting U.S. forces and other defended assets during Real World threat events. The program supports improving products delivered to Warfighters through technical reviews and technical analyses supporting strategic and regional BMD planning, development of shot doctrine and BMD defense design. The JWSP also enables the inclusion of both CCMD and MDA BMD objectives in CCMD/Joint Staff-sponsored exercises and wargames, which are used to sharpen and enhance joint BMD warfighting skills.

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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	48.767	51.532	51.411	-	51.411
Current President's Budget	48.401	51.532	49.560	-	49.560
Total Adjustments	-0.366	0.000	-1.851	-	-1.851
• 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	-0.369	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.003	0.000	-1.851	-	-1.851

Change Summary Explanation

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
MD03: <i>Joint Warfighter Support</i>	104.989	14.914	16.904	14.903	-	14.903	16.336	15.018	15.399	15.332	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A

A. Mission Description and Budget Item Justification

There are six primary functions in Joint Warfighter Support (MD03):

- (1) Current Operations Support
- (2) Combatant Command Support
- (3) Military Department Engagement
- (4) Operational BMDS Verification and Validation
- (5) Warfighter Training Support
- (6) Joint Staff Engagement

Detailed descriptions and accomplishments are provided in the following section

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

	FY 2019	FY 2020	FY 2021
Title: Strategic Warfighter Integration	14.914	16.904	14.903
Articles:	-	-	-
Description: (1) Current Operations Support:			
- Manage and operate the MDA Operations Support Center (OSC) 24 hours a day, 7 days a week, 365 days a year and two MDA Operations Centers (MOCs) in Virginia and Alabama for daily execution of scheduled BMDS activities; prepare and transmit Logistic Reports.			
- Manage and execute the BMDS Asset Management (BAM) process of planning, coordinating, scheduling and executing access to operational and Research, Development, Test and Evaluation (RDT&E) assets operated by MDA and Warfighters dispersed globally with differing missions and competing priorities to facilitate assets in support of Warfighter BMD; Missile Warning/Space Surveillance (MS/SS) operations; MDA Research, Development, Test and Evaluation (RDT&E), training and sustainment activities.			
- Lead the MDA Operations Support Planning Team (OSPT), an MDA-wide task force supporting Warfighters, Services and the Joint Staff to address real-world contingencies and crisis events.			

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021
<p>- Develop BMDS Annual Plan and BMDS Operating Schedule facilitating key stakeholder coordination and maximizing operational availability of the BMDS.</p> <p>- Develop and maintain the Integrated Scheduling Tool.</p> <p>- Facilitate major software/hardware additions to the Operational Capacity Baseline for homeland/regional defenses.</p> <p>- Develop and maintain the BMDS Operational Readiness Reporting System (BORRS) application to collect and report BMDS operational availability and readiness data through the network-based tool to distribute data to OSD, CCMDs, Joint Staff, Military Services, and BMDS Operators.</p> <p>- Provide certification training to BMDS watch officers (BWO), BMDS Safety Officers (BSO), and other Operations Support Center staff.</p> <p>(2) Combatant Command Support (USSTRATCOM, USNORTHCOM):</p> <p>- Support the Warfighter Involvement Process (WIP) and other MDA Warfighter engagement efforts by assisting Warfighters in their update to the annual BMDS Prioritized Capabilities List (PCL) and Modification and Fielding Request List (MFRL).</p> <p>- Support Joint Functional Component Command Integrated Missile Defense (JFCC IMD) integration by participating in the Warfighter Forum (WFF) a multi-lateral information and decision event to address CCMD, Service and Department of Defense (DoD) BMDS equities.</p> <p>- Assist USNORTHCOM in broadening homeland defense planning to address the full range of USNORTHCOM threats by conducting the Homeland Defense Architecture Working Group (HDAWG) and Shot Management Analysis Cell (SMAC).</p> <p>- Manage the Warfighter Requests for Information (RFIs); Requests for Analyses (RFAs); and Requests for Allied Participation in Tests (RFT) processes.</p> <p>(3) Military Department Engagement:</p> <p>- Facilitate and coordinate Service Boards of Directors (BODs) on Lead Service BMDS related equities, Program Objective Memorandum (POM) development and execution; element fielding, operations and maintenance, and the BMDS capability delivery process.</p> <p>- Maintain daily, strategic-level interfaces with Military Services and Joint Staff plan for the delivery, fielding, and operation of respective Lead Service BMDS capabilities via senior-level working groups, General Officer Air and Missile Defense and Space forums.</p> <p>- Support transition and transfer to the Military Services through participation in senior-level working groups, Joint Staff directorates, and facilitate General Officer forums.</p> <p>(4) Operational BMDS Verification and Validation:</p> <p>- Provide 24 hours a day, 7 days a week, 365 days a year, global system verification and validation over the operational Common Integrated Broadcast, and Shared Early Warning System for BMD early warning data.</p>			

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2019	FY 2020	FY 2021
<p>- Support Tactical Data Processor software development, MDA flight tests and other software development efforts using live real-world broadcasts of simulated missile threats.</p> <p>- Support Naval Board of Inspection and Survey (INSURV), Shipboard installation, Aegis On-Demand, Aegis program releases, US and Coalition operational readiness and BMD Exercise requirements to validate equipment, materiel, and tactical readiness while simultaneously providing deployment certification and crew operator qualification; verifies operational readiness of both US and Coalition partners to detect a real-world launch of a ballistic threat.</p> <p>(5) Warfighter Training Support:</p> <p>- Provide Missile Defense Space Warning tool (MDST) support to increase operator proficiency, competence, and confidence; provide initial qualification training; and ship certification for Aegis BMD crews.</p> <p>- Provide technical and programmatic updates for BMD Warfighter training; participates in BMD training and Education Working Group to coordinate BMD training issues with USSTRATCOM and Joint Staff.</p> <p>- Support Fleet Synthetic and Aegis Operator Training to ensure operational readiness of Aegis as the first step in the kill chain for BMD.</p> <p>- Provide Early Warning missile injects for MT03 war games and exercises and tailored support for other Joint Warfighter Support Test events (as listed in the IMTP and R-4/4A schedule).</p> <p>(6) Joint Staff Engagement:</p> <p>- Facilitate and coordinate all Joint Staff interactions with the MDA.</p> <p>- Maintain daily, strategic-level interfaces with the Joint Staff.</p> <p>FY 2020 Plans: - SEE ABOVE</p> <p>FY 2021 Plans: - SEE ABOVE</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: N/A</p>				
Accomplishments/Planned Programs Subtotals		14.914	16.904	14.903

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Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>				Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>			

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

Line Item	FY 2019	FY 2020	FY 2021	FY 2021	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Cost To	
			Base	OCO	Total					Complete	Total Cost
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	790.316	1,303.716	1,004.305	-	1,004.305	776.125	726.566	767.592	1,068.536	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	382.759	352.288	281.957	-	281.957	576.699	656.539	574.703	593.592	Continuing	Continuing
• 0603890C: <i>BMD Enabling Programs</i>	614.855	634.449	599.380	-	599.380	552.815	544.582	560.863	582.675	Continuing	Continuing
• 0603892C: <i>AEGIS BMD</i>	724.731	737.269	814.936	-	814.936	674.825	553.402	478.000	449.145	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	500.965	549.756	593.353	-	593.353	593.330	546.471	581.376	543.971	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	51.689	56.161	55.356	-	55.356	55.721	57.457	59.798	61.334	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Integrated Research and Development for Enterprise Solutions (IRES) Contract and the Specialized Warfighter Development Contract are the major performing integrated contracts. The acquisition strategy for Strategic Warfighter Integration mission execution is to employ a contract to perform designated integration and sustainment tasks to conduct BMDS Research, Development, Test and Evaluation (RDT&E). Strategic Warfighter Integration is operated by missile defense subject matter experts composed of Government, military, civilian personnel, Contract Support Services, and major defense contractors.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Subtotal				-		-		-		-		-	-	-	N/A

Remarks
N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Strategic Warfighter Integration - Strategic Warfighter Integration - HR A&AS	C/CPFF	TEAMS : Colorado Springs	0.551	0.125	Dec 2018	0.145	Dec 2019	0.148	Dec 2020	-		0.148	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Administrative A&AS	C/CPFF	TEAMS : Colorado Springs	1.522	0.190	Nov 2018	0.260	Nov 2019	0.265	Dec 2020	-		0.265	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Civilian Salaries/ Operations Sustainment	Allot	MDA : Colorado Springs/Huntsville, NCR	34.540	3.793	Oct 2018	4.231	Oct 2019	3.646	Oct 2020	-		3.646	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Current Operations	C/CPAF	IRES : Colorado Springs	20.693	2.470	Nov 2018	3.165	Nov 2019	1.510	Nov 2020	-		1.510	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - IT Wireless Services (JRDC/ IRES)	C/CPAF	IRES : Colorado Springs, Huntsville	3.795	0.530	Dec 2018	0.546	Dec 2019	0.557	Jan 2021	-		0.557	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic	C/CPAF	SWDC : Colorado Springs	19.588	3.450	Oct 2018	3.719	Nov 2019	3.794	Nov 2020	-		3.794	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>
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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Warfighter Integration - MDST															
Strategic Warfighter Integration - Strategic Warfighter Integration - Travel and Training	Allot	MDA : Colorado Springs, Huntsville, NCR	1.366	0.231	Oct 2018	0.238	Oct 2019	0.245	Oct 2020	-		0.245	Continuing	Continuing	Continuing
Strategic Warfighter Integration - Strategic Warfighter Integration - Warfighter Support A&AS	C/CPFF	TEAMS : Colorado Springs, Huntsville, NCR	22.934	4.125	Nov 2018	4.600	Nov 2019	4.738	Nov 2020	-		4.738	Continuing	Continuing	Continuing
Subtotal			104.989	14.914		16.904		14.903		-		14.903	Continuing	Continuing	N/A

Remarks
N/A

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Subtotal			-	-		-		-		-		-	-	-	N/A

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency								Date: February 2020			
Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>				Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>			
	Prior Years	FY 2019		FY 2020		FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	104.989	14.914		16.904		14.903	-	14.903	Continuing	Continuing	N/A

Remarks

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.
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 2021 Missile Defense Agency						Date: February 2020													
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>						Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>							
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 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024		FY 2025	
Strategic Integration Wargame Events in support of MT03						◇◇◇◇◇		◇◇◇◇◇		◇◇◇◇◇		◇◇◇◇◇		◇◇◇◇◇		◇◇◇◇◇		◇◇◇◇◇	

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD03 / <i>Joint Warfighter Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Strategic Integration Wargame Events in support of MT03	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency										Date: February 2020		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>				Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
MT03: <i>Joint Warfighter Support Test</i>	95.161	31.132	32.278	32.531	-	32.531	33.187	33.826	34.848	35.574	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A

A. Mission Description and Budget Item Justification

Joint Warfighter Support Test is comprised of two primary responsibilities: 1) Exercises and wargames and, 2) Warfighter operational support.

Exercises and wargames:

- Support the Warfighter to plan and conduct worldwide exercises and wargames supporting BMDS development and fielding.
- Enable the Warfighter to define, test, deploy, and employ new missile defense capabilities.
- Support Joint Functional Component Commander for Integrated Missile Defense (JFCC IMD) BMDS Table Top Exercises (TTX) to facilitate the global missile defense capability and to refine the European capability concept of operations through low-fidelity demonstration Models & Simulation (M&S).
- Examine current and future BMDS operational capabilities for Geographic (i.e., USCENTCOM, USEUCOM, and USINDOPACOM) and Strategic (i.e., USNORTHCOM and USSTRATCOM) Combatant Commands (CCMDs).
- Support the GCC Assistants to the Director (ATDs) and Liaison Officers (LNOs).
- Complete test planning for BMDS events.

Warfighter operational support (program planning and operations):

- Prepare MDA senior leadership for engagements with the Geographic Combatant Commands (GCCs) by providing logistical support and developing briefings for the GCC Assistant Test Directors (ATDs) and MDA Director.
- Interface with the GCCs on BMD operational issues by providing planning and analysis support and translating warfighter responses to MDA issues.
- Support GCC contingency activation planning for real-world contingencies and theater security cooperation programs by supervising the activation of MDA assets to use in the operational BMDS.
- Aid GCC participation in BMDS capability definition, design, development, integration, and delivery processes through the Warfighter Involvement Process (WIP) to synchronize capability delivery with operational readiness and acceptance.
- Provide resource management and administration of MT03 personnel and funding.

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

	FY 2019	FY 2020	FY 2021
Title: Wargames and Exercises	25.679	27.027	26.864
Articles:	-	-	-

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

Description: The Missile Defense Agency provides operational-level interfaces to the Global Combatant Commands (GCCs) and ensures Warfighter participation to develop future missile defense capabilities. The MDA will continue to enhance Warfighter operational support through internal support activities and proactive execution of Combatant Command (CCMD) interface activities.

- Work with CCMDs on the inclusion of Allies and regional partners into MDA Ground and Flight tests and exercises and wargames simulations.
- Provide Warfighter training simulations in direct support of flight and ground tests.
- Serve as liaison between internal MDA organizations and the JFCC IMD across all functional areas to facilitate Geographic Combatant Command (GCC) participation in the BMDS capability definition, design, development, integration and delivery processes.
- Support JFCC IMD and USEUCOM in the European Phased Adaptive Approach (EPAA) implementation process through the planning, testing, integration and execution of BMDS exercises and wargames.
- Support Joint Staff integration of MDA models into Tier I events through the Joint, Live Virtual Constructive (JLVC) campaign.
- Work with Program Offices and the Warfighter; publish a Concept of Operations that will support future MDA Models and Simulation (M&S) support to BMD exercises and wargames.
- Coordinate and integrate CCMD requirements into the BMDS Integrated Master Test Plan.
- Provide support to the development and update of Ballistic Missile Defense (BMD) portions of CCMD Operation Plans (OPLANS) and Contingency Plans (CONPLANS).
- Engage in MDA/GCC interface and synchronization of information regarding capabilities and security cooperation strategies.
- Develop and provide exercises, wargames and Table Top Exercises (TTX) in support of CCMD-specific scenarios as listed in the R4-4A schedule for the USEUCOM, USINDOPACOM, USCENTCOM and USNORTHCOM/USSTRATCOM Geographic Combatant Commands.

Additional GCC interface activities by region will include:
USEUCOM Engagement:

- Coordinate with USEUCOM for continued MDA support of key EPAA Approach milestones in order to provide a full range of BMDS capabilities addressing ballistic missile threats to the European theater.
- Work with USEUCOM to include NATO Allies and regional partners during MDA Ground tests, Flight tests, exercises and wargames in order to improve Allied - US BMDS interoperability.
- Coordinate with MDA program elements to facilitate rapid agency responses to USEUCOM requests for analysis and information. Provide reach-back support for the MDA ATD and LNO in USEUCOM for activities requiring visibility by the MDA Director and Director for Test.

FY 2019	FY 2020	FY 2021

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2019	FY 2020	FY 2021
<p>- Coordinate with MDA Global Deployment Program Office to plan and execute actions required for deployment of BMDS assets in the USEUCOM theater of operations.</p> <p>USCENTCOM Engagement:</p> <ul style="list-style-type: none"> - Promote CCMD leadership in developing a regional partner data sharing system supporting USCENTCOM regional IAMD architecture development. - Coordinate with MDA program elements, assisting in planning and execution activities supporting USCENTCOM's regional partners. <p>USINDOPACOM Engagement:</p> <ul style="list-style-type: none"> - Assist USINDOPACOM leadership in broadening Phased Adaptive Approach planning to address a full range of threats and integration of allies into the BMDS. - Support USINDOPACOM J3 in efforts to promote purchase of an Aegis Ashore system. - Share operational information and knowledge and help allies develop common operational procedures. <p>FY 2020 Plans:</p> <ul style="list-style-type: none"> - SEE ABOVE. <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - SEE ABOVE. <p>FY 2020 to FY 2021 Increase/Decrease Statement:</p> <p>N/A</p>				
Title: Program, Planning and Operations		5.453	5.251	5.667
		Articles:	-	-
<p>Description: MDA provides operational-level interface to the GCCs and ensures Warfighter participation in the development of future missile defense capabilities and requirements. The key Warfighter interface activities include:</p> <ul style="list-style-type: none"> - Support the Operations Support Planning Team (OSPT) activation during heightened period of interest. - Support Warfighters, DoD Agencies, and Military Services in identifying desired missile defense capabilities and characteristics. - Obtain Warfighter participation and advice on desired operational features and approaches to system fielding throughout development. - Track analysis and responses for CCMD Requests for Analysis (RFA) and Requests for Information (RFI). - Prepare MDA senior leadership for U.S. Army, Navy, and Air Force BOD and AMD General Officer Steering Committee meetings. 				

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021
- Provide resource management and administration of BMDS Warfighter personnel and budget. - Manage travel to support exercises and wargames, Assistant to the Director (ATDs), and Liaison Officer (LNOs) as MDA representatives at the GCC HQs. FY 2020 Plans: - SEE ABOVE. FY 2021 Plans: - SEE ABOVE. FY 2020 to FY 2021 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	31.132	32.278	32.531

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

N/A

Remarks

D. Acquisition Strategy

In order to optimize the performance of the Ballistic Missile Defense System, MDA leverages Defense Department executive agents as well as the MDA Integrated Research and Development for Enterprise Solutions (IRES) contract.

The executing agents utilize various contracting strategies in a flexible manner to maximize their contribution to the BMDS. Products and Services are acquired by competitive means to the extent that is possible and practical.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Wargames and Exercises - Combatant Commanders (COCOM)/Wargame Support	C/CPAF	IRES/MIPR : Colorado Springs, Huntsville	56.440	17.983	Nov 2018	27.027	Nov 2019	26.864	Nov 2020	-		26.864	Continuing	Continuing	Continuing
Wargames and Exercises - Wargame Support	C/CPAF	IRES/MIPR : Colorado Springs	20.047	7.696	Nov 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program, Planning and Operations - Civilian Salaries/Operations Sustainment/Travel & Training	Allot	MDA : Colorado Springs, Huntsville, NCR	6.454	1.954	Oct 2018	2.802	Oct 2019	3.230	Oct 2020	-		3.230	Continuing	Continuing	Continuing
Program, Planning and Operations - Combatant Commanders (COCOM) Support A&AS	C/CPFF	TEAMS : Colorado Springs, Huntsville, NCR	3.274	0.982	Oct 2018	2.449	Oct 2019	2.437	Oct 2020	-		2.437	Continuing	Continuing	Continuing
Program, Planning and Operations - Government Travel & Training	Allot	MDA : Colorado Springs, Huntsville, NCR	2.032	0.756	Sep 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program, Planning and Operations - Support to MDA Leadership A&AS	C/CPFF	TEAMS : Colorado Springs, Huntsville, NCR	6.914	1.761	Oct 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			95.161	31.132		32.278		32.531		-		32.531	Continuing	Continuing	N/A

Remarks
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	95.161	31.132	32.278	32.531	-	32.531	Continuing	Continuing	N/A

Remarks
Prior year funding was captured in the MD03 budget project.
Award Dates reflect date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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	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 2019	FY 2020	FY 2021	FY 2022		FY 2023	FY 2024	FY 2025					
(WG) Demonstration, Table-top Exercises & Experiments 18	◆															
(EX) Joint Live, Virtual, and Constructive 2017/18-2	◆	◆														
(EX) GLOBAL THUNDER 19	◆															
(EX) KEEN SWORD 19	◆															
(EX) VIGILANT SHIELD 19	◆															
(WG) Multi-National Missile Defense Conference (MNC) 18	◆															
(EX) EPOCH PLANEX 20	▲															
(EX) GLOBAL LIGHTNING 19	◆	◆														
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 18		▲														
(EX) EUROPEAN TEST BED 19		▲														
(EX) Joint Project Optic Windmill 2019		◆														
(EX) KEY RESOLVE 19		▲														
(EX) RESILIENT SHIELD 19		▲														
(EX) PACIFIC SENTRY 19	◆	◆	◆													
(WG) Huntsville Wargames 19			◆	◆												
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 19				▲												
(WG) Space & Missile Defense Symposium 19				▲												
(EX) AUSTERE CHALLENGE 19		◆	◆	◆	◆											
(WG) NIMBLE TITAN 20		◇	◇	◇	◇	◇	◇									
(EX) Joint Live, Virtual, and Constructive 2019/20-1		◆	◆	◆	◆											
(WG) Demonstration, Table-top Exercises & Experiments 19			◆	◆	◆											
(EX) Air and Missile Defense Exercise 20-1				△												
(EX) Combined Command Post Training TAC 2				▲												
(EX) GLOBAL THUNDER 20				◇	◇											

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</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 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	
(EX) VIGILANT SHIELD 20			◇	◇																		
(WG) Multi-National Missile Defense Conference (MNC) 19			◆	◆																		
(EX) KEEN EDGE 20			◇	◇	◇																	
(EX) JUNIPER COBRA 20				◇	◇																	
(EX) GLOBAL LIGHTNING 20				◇	◇																	
(EX) EAGLE RESOLVE 20					△																	
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 19					△																	
(EX) KEY RESOLVE 20					△																	
(EX) EUROPEAN TEST BED 20					△																	
(EX) RESILIENT SHIELD 20					△																	
(EX) STEADFAST ALLIANCE 20					◇	◇																
(EX) PACIFIC SENTRY 20					◇	◇	◇															
(EX) Joint Live, Virtual, and Constructive 2019/20-2					◇	◇	◇	◇														
(EX) GLOBAL RESPONSE EXERCISE 09						△																
(WG) Demonstration, Table-top Exercises & Experiments 20						◇	◇	◇														
(WG) BMDS Wargames 21						◇	◇	◇	◇	◇												
(EX) AIR AND MISSILE DEFENSE EXERCISE 21						△																
(EX) ULCHI FREEDOM GUARDIAN 20						△																
(EX) GLOBAL RESPONSE EXERCISE 10						△																
(WG) Multi-National Missile Defense Conference (MNC) 20						◇	◇															
(EX) VIGILANT SHIELD 21						◇	◇															
(EX) KEEN SWORD 21						◇	◇															
(EX) GLOBAL THUNDER 21						◇	◇															
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 20							△															

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</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 2019			FY 2020			FY 2021			FY 2022			FY 2023			FY 2024			FY 2025		
(EX) AUSTERE CHALLENGE 21							◇	◇	◇	◇											
(WG) NIMBLE TITAN 22							◇	◇	◇	◇	◇	◇	◇								
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 20								△													
(EX) GLOBAL LIGHTNING 21							◇	◇													
(EX) Joint Project Optic Windmill 2021							◇	◇													
(EX) EUROPEAN TEST BED 21								△													
(EX) RESILIENT SHIELD 21								△													
(EX) PACIFIC SENTRY 21								◇	◇	◇											
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 21								◇	◇	◇											
(WG) Huntsville Wargames 21									◇	◇											
(WG) Demonstration, Table-top Exercises & Experiments 21									◇	◇	◇										
(EX) Joint Live, Virtual, and Constructive 2021/22-1										◇	◇	◇	◇	◇	◇						
(WG) Space & Missile Defense Symposium 21										△											
(EX) VIGILANT SHIELD 22										◇	◇										
(EX) KEEN EDGE 22										◇	◇	◇									
(EX) EPOCH PLANEX 23												△									
(EX) JUNIPER COBRA 22												◇	◇								
(EX) GLOBAL LIGHTNING 22												◇	◇								
(EX) EAGLE RESOLVE 22													△								
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 21													△								
(EX) KEY RESOLVE 22													△								
(EX) EUROPEAN TEST BED 22													△								
(EX) RESILIENT SHIELD 22													△								
(EX) STEADFAST ALLIANCE 22													◇	◇							

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</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 2019			FY 2020			FY 2021			FY 2022			FY 2023			FY 2024			FY 2025		
(EX) PACIFIC SENTRY 22										◇	◇	◇									
(EX) Joint Live, Virtual, and Constructive 2021/22-2										◇	◇	◇	◇								
(WG) Demonstration, Table-top Exercises & Experiments 22											◇	◇	◇								
(WG) BMDs Wargames 23											◇	◇	◇	◇	◇						
(EX) ULCHI FREEDOM GUARDIAN 22												△									
(EX) AIR AND MISSILE DEFENSE EXERCISE 22											◇	◇									
(EX) AIR AND MISSILE DEFENSE EXERCISE 23												△									
(WG) Multi-National Missile Defense Conference (MNC) 22												◇	◇								
(EX) VIGILANT SHIELD 23												◇	◇								
(EX) KEEN SWORD 23												◇	◇								
(EX) GLOBAL THUNDER 22												◇	◇								
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 22													△								
(EX) GLOBAL RESPONSE EXERCISE 11													△								
(EX) GLOBAL RESPONSE EXERCISE 12													△								
(EX) GLOBAL LIGHTNING 23													◇	◇							
(EX) AUSTERE CHALLENGE 23													◇	◇	◇	◇					
(WG) NIMBLE TITAN 24													◇	◇	◇	◇	◇	◇	◇		
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 22														△							
(EX) Joint Project Optic Windmill 2023														◇							
(EX) EUROPEAN TEST BED 23														△							
(EX) KEY RESOLVE 23														△							
(EX) RESILIENT SHIELD 23														△							
(EX) STEADFAST ARMOUR 23														◇	◇						
(EX) PACIFIC SENTRY 23														◇	◇	◇					

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</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 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025			
(EX) PACIFIC SENTRY 24					◇	◇	◇			
(WG) Huntsville Wargames 23					△					
(EX) Joint Live, Virtual, and Constructive 2023/24-1					◇	◇	◇			
(WG) Demonstration, Table-top Exercises & Experiments 23					◇	◇	◇			
(WG) Space & Missile Defense Symposium 23						△				
(EX) ULCHI FREEDOM GUARDIAN 23						△				
(EX) AIR AND MISSILE DEFENSE EXERCISE 24						△				
(WG) Multi-National Missile Defense Conference (MNC) 23					◇	◇				
(EX) GLOBAL THUNDER 23					◇	◇				
(EX) VIGILANT SHIELD 24					◇	◇				
(EX) KEEN EDGE 24					◇	◇	◇			
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 23						△				
(EX) JUNIPER COBRA 24						◇	◇			
(EX) GLOBAL LIGHTNING 24						◇	◇			
(EX) EAGLE RESOLVE 24							△			
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 23							△			
(EX) EUROPEAN TEST BED 24							△			
(EX) KEY RESOLVE 24							△			
(EX) RESILIENT SHIELD 24							△			
(EX) STEADFAST ALLIANCE 24						◇	◇			
(EX) Joint Live, Virtual, and Constructive 2023/24-2						◇	◇	◇	◇	
(WG) Demonstration, Table-top Exercises & Experiments 24							◇	◇	◇	
(WG) BMDS Wargames 25							◇	◇	◇	◇
(EX) ULCHI FREEDOM GUARDIAN 24								△		

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</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 2019		FY 2020		FY 2021		FY 2022		FY 2023		FY 2024		FY 2025		
(EX) GLOBAL THUNDER 24												◇	◇		
(WG) Multi-National Missile Defense Conference (MNC) 24												◇	◇		

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
(WG) Demonstration, Table-top Exercises & Experiments 18	1	2019	1	2019
(EX) Joint Live, Virtual, and Constructive 2017/18-2	1	2019	2	2019
(EX) GLOBAL THUNDER 19	1	2019	1	2019
(EX) KEEN SWORD 19	1	2019	1	2019
(EX) VIGILANT SHIELD 19	1	2019	1	2019
(WG) Multi-National Missile Defense Conference (MNC) 18	1	2019	1	2019
(EX) EPOCH PLANEX 20	1	2019	1	2019
(EX) GLOBAL LIGHTNING 19	1	2019	2	2019
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 18	2	2019	2	2019
(EX) EUROPEAN TEST BED 19	2	2019	2	2019
(EX) Joint Project Optic Windmill 2019	2	2019	2	2019
(EX) KEY RESOLVE 19	2	2019	2	2019
(EX) RESILIENT SHIELD 19	2	2019	2	2019
(EX) PACIFIC SENTRY 19	1	2019	3	2019
(WG) Huntsville Wargames 19	3	2019	4	2019
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 19	4	2019	4	2019
(WG) Space & Missile Defense Symposium 19	4	2019	4	2019
(EX) AUSTERE CHALLENGE 19	2	2019	1	2020
(WG) NIMBLE TITAN 20	2	2019	4	2020
(EX) Joint Live, Virtual, and Constructive 2019/20-1	2	2019	1	2020
(WG) Demonstration, Table-top Exercises & Experiments 19	3	2019	1	2020
(EX) Air and Missile Defense Exercise 20-1	4	2019	4	2019

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
(EX) Combined Command Post Training TAC 2	4	2019	4	2019
(EX) GLOBAL THUNDER 20	4	2019	1	2020
(EX) VIGILANT SHIELD 20	4	2019	1	2020
(WG) Multi-National Missile Defense Conference (MNC) 19	4	2019	1	2020
(EX) KEEN EDGE 20	4	2019	2	2020
(EX) JUNIPER COBRA 20	1	2020	2	2020
(EX) GLOBAL LIGHTNING 20	1	2020	2	2020
(EX) EAGLE RESOLVE 20	2	2020	2	2020
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 19	2	2020	2	2020
(EX) KEY RESOLVE 20	2	2020	2	2020
(EX) EUROPEAN TEST BED 20	2	2020	2	2020
(EX) RESILIENT SHIELD 20	2	2020	2	2020
(EX) STEADFAST ALLIANCE 20	2	2020	3	2020
(EX) PACIFIC SENTRY 20	2	2020	4	2020
(EX) Joint Live, Virtual, and Constructive 2019/20-2	2	2020	1	2021
(EX) GLOBAL RESPONSE EXERCISE 09	3	2020	3	2020
(WG) Demonstration, Table-top Exercises & Experiments 20	3	2020	1	2021
(WG) BMDS Wargames 21	3	2020	3	2021
(EX) AIR AND MISSILE DEFENSE EXERCISE 21	4	2020	4	2020
(EX) ULCHI FREEDOM GUARDIAN 20	4	2020	4	2020
(EX) GLOBAL RESPONSE EXERCISE 10	4	2020	4	2020
(WG) Multi-National Missile Defense Conference (MNC) 20	4	2020	1	2021
(EX) VIGILANT SHIELD 21	4	2020	1	2021
(EX) KEEN SWORD 21	4	2020	1	2021
(EX) GLOBAL THUNDER 21	4	2020	1	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 20	1	2021	1	2021
(EX) AUSTERE CHALLENGE 21	1	2021	4	2021
(WG) NIMBLE TITAN 22	1	2021	4	2022
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 20	2	2021	2	2021
(EX) GLOBAL LIGHTNING 21	2	2021	3	2021
(EX) Joint Project Optic Windmill 2021	1	2021	2	2021
(EX) EUROPEAN TEST BED 21	2	2021	2	2021
(EX) RESILIENT SHIELD 21	2	2021	2	2021
(EX) PACIFIC SENTRY 21	2	2021	4	2021
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 21	2	2021	4	2021
(WG) Huntsville Wargames 21	3	2021	4	2021
(WG) Demonstration, Table-top Exercises & Experiments 21	3	2021	1	2022
(EX) Joint Live, Virtual, and Constructive 2021/22-1	4	2021	1	2023
(WG) Space & Missile Defense Symposium 21	4	2021	4	2021
(EX) VIGILANT SHIELD 22	4	2021	1	2022
(EX) KEEN EDGE 22	4	2021	2	2022
(EX) EPOCH PLANEX 23	1	2022	1	2022
(EX) JUNIPER COBRA 22	1	2022	2	2022
(EX) GLOBAL LIGHTNING 22	1	2022	2	2022
(EX) EAGLE RESOLVE 22	2	2022	2	2022
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 21	2	2022	2	2022
(EX) KEY RESOLVE 22	2	2022	2	2022
(EX) EUROPEAN TEST BED 22	2	2022	2	2022
(EX) RESILIENT SHIELD 22	2	2022	2	2022
(EX) STEADFAST ALLIANCE 22	2	2022	3	2022

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
(EX) PACIFIC SENTRY 22	2	2022	4	2022
(EX) Joint Live, Virtual, and Constructive 2021/22-2	2	2022	1	2023
(WG) Demonstration, Table-top Exercises & Experiments 22	3	2022	1	2023
(WG) BMDS Wargames 23	3	2022	3	2023
(EX) ULCHI FREEDOM GUARDIAN 22	4	2022	4	2022
(EX) AIR AND MISSILE DEFENSE EXERCISE 22	3	2022	4	2022
(EX) AIR AND MISSILE DEFENSE EXERCISE 23	4	2022	4	2022
(WG) Multi-National Missile Defense Conference (MNC) 22	4	2022	1	2023
(EX) VIGILANT SHIELD 23	4	2022	1	2023
(EX) KEEN SWORD 23	4	2022	1	2023
(EX) GLOBAL THUNDER 22	4	2022	1	2023
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 22	1	2023	1	2023
(EX) GLOBAL RESPONSE EXERCISE 11	1	2023	1	2023
(EX) GLOBAL RESPONSE EXERCISE 12	1	2023	1	2023
(EX) GLOBAL LIGHTNING 23	1	2023	2	2023
(EX) AUSTERE CHALLENGE 23	1	2023	4	2023
(WG) NIMBLE TITAN 24	1	2023	4	2024
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 22	2	2023	2	2023
(EX) Joint Project Optic Windmill 2023	2	2023	2	2023
(EX) EUROPEAN TEST BED 23	2	2023	2	2023
(EX) KEY RESOLVE 23	2	2023	2	2023
(EX) RESILIENT SHIELD 23	2	2023	2	2023
(EX) STEADFAST ARMOUR 23	2	2023	3	2023
(EX) PACIFIC SENTRY 23	2	2023	4	2023
(EX) PACIFIC SENTRY 24	2	2023	4	2023

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MT03 / <i>Joint Warfighter Support Test</i>
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Events	Start		End	
	Quarter	Year	Quarter	Year
(WG) Huntsville Wargames 23	3	2023	3	2023
(EX) Joint Live, Virtual, and Constructive 2023/24-1	3	2023	1	2024
(WG) Demonstration, Table-top Exercises & Experiments 23	3	2023	1	2024
(WG) Space & Missile Defense Symposium 23	4	2023	4	2023
(EX) ULCHI FREEDOM GUARDIAN 23	4	2023	4	2023
(EX) AIR AND MISSILE DEFENSE EXERCISE 24	4	2023	4	2023
(WG) Multi-National Missile Defense Conference (MNC) 23	4	2023	1	2024
(EX) GLOBAL THUNDER 23	4	2023	1	2024
(EX) VIGILANT SHIELD 24	4	2023	1	2024
(EX) KEEN EDGE 24	4	2023	2	2024
(EX) JOINT AIR AND MISSILE DEFENSE EXERCISE SERIES 23	1	2024	1	2024
(EX) JUNIPER COBRA 24	1	2024	2	2024
(EX) GLOBAL LIGHTNING 24	1	2024	2	2024
(EX) EAGLE RESOLVE 24	2	2024	2	2024
(EX) EUROPEAN AIR & MISSILE DEFENSE EXERCISE 23	2	2024	2	2024
(EX) EUROPEAN TEST BED 24	2	2024	2	2024
(EX) KEY RESOLVE 24	2	2024	2	2024
(EX) RESILIENT SHIELD 24	2	2024	2	2024
(EX) STEADFAST ALLIANCE 24	2	2024	3	2024
(EX) Joint Live, Virtual, and Constructive 2023/24-2	2	2024	1	2025
(WG) Demonstration, Table-top Exercises & Experiments 24	3	2024	1	2025
(WG) BMDS Wargames 25	3	2024	3	2025
(EX) ULCHI FREEDOM GUARDIAN 24	4	2024	4	2024
(EX) GLOBAL THUNDER 24	4	2024	1	2025
(WG) Multi-National Missile Defense Conference (MNC) 24	4	2024	1	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MC03 / <i>Cyber Operations</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
MC03: <i>Cyber Operations</i>	0.146	0.150	0.156	0.157	-	0.157	0.159	0.162	0.167	0.170	0.000	1.267
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A

A. Mission Description and Budget Item Justification

This project verifies and validates that cybersecurity and/or cybersecurity-enabled products (firewalls, data/network encryption devices, routers, Intrusion Detection Systems, etc.) used within the MDA infrastructure have a current and Evaluated Assurance Level (EAL) certification and rating. They assure that validated IT products are listed on the DOD Approved Products List (APLITS). There is an additional requirement to routinely identify findings and prepare a report with recommendations. The Warfighter Strategic Integration directorate (DDW) requires this support in the IT product evaluation provided. Activities in the Project are necessary to comply with the Federal Information Systems Modernization Act of 2014 (FISMA).

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

	FY 2019	FY 2020	FY 2021
Title: Strategic Warfighter Integration Software Assurance Support	0.150	0.156	0.157
Articles:	-	-	-
Description: Perform manual and automated software code analysis, using GFE tools (e.g. Fortify 360), to detect false positives, weaknesses, and vulnerabilities.			
1) Verify and validate cybersecurity and/or cybersecurity-enabled products (firewalls, data/network encryptors, routers, Intrusion Detection Systems, etc.) used within the MDA infrastructure have a current and Evaluated Assurance Level (EAL) certification and rating. Validate IT products are listed on the DoD Approved Products List (APLITS).			
2) Participate in meetings with customers to review software analysis findings and proposed courses of action for remediation.			
3) Prepare a comprehensive report detailing the weaknesses and vulnerabilities found. Document the references to files and line numbers.			
4) Maintain a record of all software code analysis documentation and organized in accordance with Government policy.			
Specific and/or unique accomplishments to each FY are as follows:			
FY 2020 Plans: - SEE ABOVE			
FY 2021 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency		Date: February 2020		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MC03 / <i>Cyber Operations</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2019	FY 2020	FY 2021
- SEE ABOVE				
FY 2020 to FY 2021 Increase/Decrease Statement: N/A				
Accomplishments/Planned Programs Subtotals		0.150	0.156	0.157
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MC03 / <i>Cyber Operations</i>
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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Strategic Warfighter Integration Software Assurance Support - DDW Cyber Support (ICVA)	C/CPFF	TEAMS : COS	0.146	0.150	Dec 2018	0.156	Dec 2019	0.157	Feb 2021	-		0.157	Continuing	Continuing	Continuing
Subtotal			0.146	0.150		0.156		0.157		-		0.157	Continuing	Continuing	N/A

Remarks
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.146	0.150	0.156	0.157	-	0.157	Continuing	Continuing	N/A

Remarks
Award Dates reflect date of first obligation. Additional obligations may incrementally occur throughout the year.

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MC03 / <i>Cyber Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MC03 Cyber Operations	1	2019	4	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency										Date: February 2020		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>				Project (Number/Name) MD40 / <i>Program-Wide Support</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	15.399	2.205	2.194	1.969	-	1.969	2.053	2.053	2.719	2.947	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Program Wide Support (PWS) is allocated on a pro-rata basis across multiple Agency PEs 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 MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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 worldwide. 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 across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (FSRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; 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)

	FY 2019	FY 2020	FY 2021
Title: Program Wide Support	2.205	2.194	1.969
Articles:	-	-	-
Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire MDS. These functions include Government Civilians and Contract Support Services. This effort provides integrity and oversight of the MDS 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 worldwide. 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 across multiple geographic locations; commercial and ancillary facility services; management of all facility aspects regardless of lifecycle stage; supplies and maintenance; compliance with statutory environmental requirements; data and unified communications support; materiel and readiness and central property management of equipment; Facilities Sustainment,			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021
Restoration and Modernization (FSRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; 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.			
<i>FY 2020 Plans:</i> - SEE ABOVE.			
<i>FY 2021 Plans:</i> - SEE ABOVE.			
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> N/A			
Accomplishments/Planned Programs Subtotals	2.205	2.194	1.969

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

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	Various	Various Multi: AL, CO, CA, VA : Various	0.859	0.046	Jul 2019	0.033	Jul 2020	0.060	Jul 2021	-		0.060	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries, Travel, Training	Various	MDA : Multi:AK,AL, CA, CO, VA	5.370	1.060	Jan 2019	1.200	Jan 2020	0.000		-		0.000	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	ALATEC , INC. : AL, CO, VA	7.316	0.000		0.961	May 2020	1.909	Jul 2021	-		1.909	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services (Reqn)	Reqn	Various : Multi:AK, AL, CA, CO, VA	0.397	1.099	Jun 2019	0.000		0.000		-		0.000	0.000	1.496	0.000
Program Wide Support - Prior year no longer funded in the FYDP	Various	Various : Various	1.457	0.000		0.000		0.000		-		0.000	0.000	1.457	0.000
Subtotal			15.399	2.205		2.194		1.969		-		1.969	Continuing	Continuing	N/A

Remarks
N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.399	2.205	2.194	1.969	-	1.969	Continuing	Continuing	N/A

Remarks
Award Dates 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 2021 Missile Defense Agency **Date:** February 2020

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</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 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
MD40 Program-Wide Support					◇	◇	◇	◇	◇	◇	◇

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Missile Defense Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603898C / <i>Ballistic Missile Defense Joint Warfighter Support</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MD40 Program-Wide Support	1	2019	4	2025